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THE AMERICAN
School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION

IN THIS ISSUE:

★ Your School System and Intergroup Education — *Lamers*

★ City Charters and Education — *Bolmeier*

★ The School Purchasing Methods Used in Cleveland — *Smircina*

★ New Light on School Lighting — *Biesele, Jr.*

★ A Useful Staff Position—The Administrative Assistant to the Superintendent — *Hill-Cooper*

VOLUME 113, NUMBER 1 JULY, 1946

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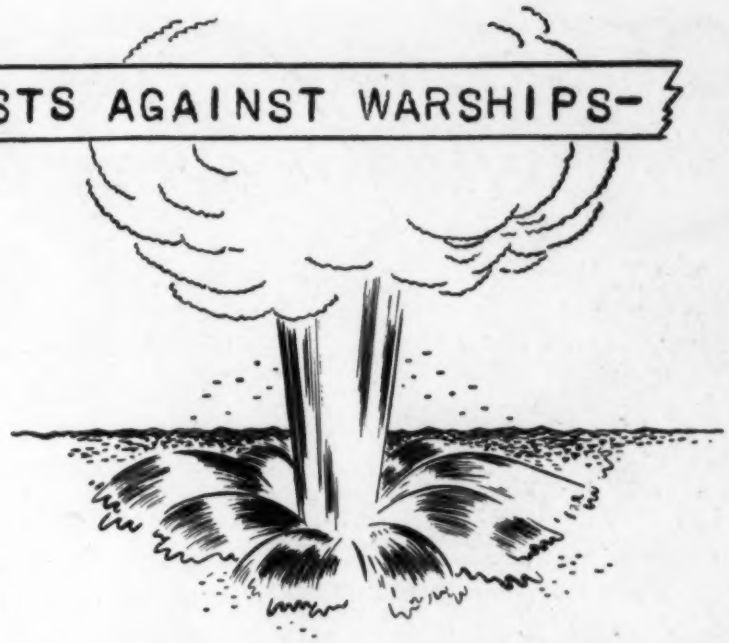

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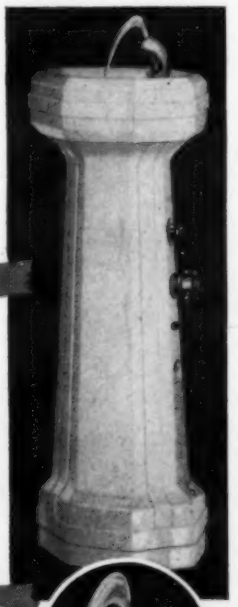

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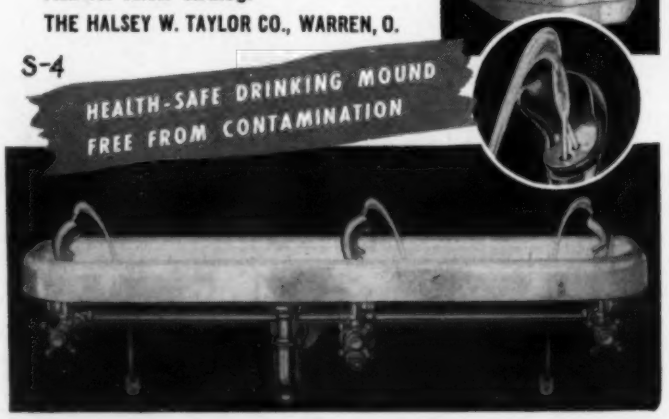

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The contents of this issue are listed in the "Education Index."
Member, Audit Bureau of Circulations and Associated Business Papers.

Preparing for 1946-47

A number of situations combine to again limit the amount of rehabilitation, repair, and renovation of school buildings this summer. Shortages of material, critical labor situations, and price structures continue with little or no relief, increasing the difficulties and problems of school administration and school plant operation and maintenance. Prices continue to increase with the forecast of the greatest price rise in the postwar period likely to take place during the next six months or a year. The limited amount of plant maintenance and rehabilitation work undertaken during the four summers of war has resulted in a large backlog of needed building repair and renovation and replacement of equipment.

Confronted with this critical situation the work to be undertaken this summer must be carefully scheduled in accordance with its importance in relation to the health and safety of pupils. This involves all sanitary and safety facilities. It includes the heating and ventilation equipment, electrical equipment and wiring, and especially a careful check on all areas and equipment where a possible fire hazard could exist. Entrances and exits to the school building and to the various areas within the building, the gymnasium, playground, and the facilities in these areas should be given careful attention.

Close and continuous contact with all your sources of supply, especially with the producers of the facilities now in use in your schools, is very important under these conditions. Since many schools will open in September with only the most essential jobs completed and with inadequate equipment and supplies, the rehabilitation, repair, and renovation work will continue on during the school year and in preparation for the extensive program of change and expansion in all school operations which may well begin in the spring of 1947.

The manufacturers, the school equipment and supplies industry, and schoolhouse architects are in a position to render the very best service under present conditions and to assist you in your product procurement problem. Refer to the advertising in THE AMERICAN SCHOOL BOARD JOURNAL and make use of the inquiry form on page 69.

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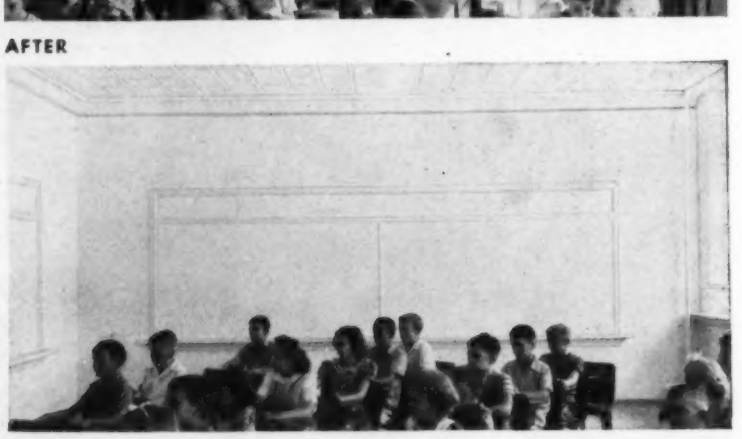

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THE AMERICAN
School Board Journal

Volume 113, No. 1 JULY, 1946 Subscription, $3.00 the Year

City Charters and Education

*E. C. Bolmeier**

No two states have identical laws with respect to city charters. Moreover, since it is common practice for the state to permit each city to choose the type of charter it prefers, notable variations exist among the city charters in a single state. Also, some cities are governed by "optional charters" established by general law. Massachusetts cities afford illustrations: Fall River and Quincy are governed by Plan A charters, whereas Lowell has adopted the Plan B charter. Although certain features of both Plan A and Plan B charters are similar, numerous provisions pertaining to the management and maintenance of the public schools are strikingly different. For the purpose of this study such charters will be designated as "general charters" since they do not specifically and exclusively refer to particular cities.

HOME-RULE CHARTERS

Although the term "municipal home-rule" is somewhat self-explanatory, various meanings have been attached to it. McBain says: "Broadly construed the term 'municipal home-rule' has reference to any power of self-government that may be conferred upon a city, whether the grant of such power be referable to statute or constitution. In American usage, however, the term has become associated with those powers that are vested in cities by constitutional provisions to frame and adopt their own charters. . . ."[1]

Since the city of St. Louis, Mo., was permitted, in 1875, to exercise powers of partial self-government no less than 16 states[2] have amended their constitutions so as to permit home rule government. The fact that constitutional provisions of the various states differ with respect to the degree of advantage a home rule charter may have over general statutes, and the further fact that laws of home rule government are permissive rather than mandatory, account for the varying proportions of cities in the respective states which have adopted home rule charters. Missouri, which was the first state to permit self-government for cities, has only two cities, St. Louis and Kansas City, with home rule charters. In Wisconsin general statutes are so flexible with respect to local self-government that there are no complete home rule charters. On the other extreme approximately seventy cities in the state of Minnesota have adopted home rule charters during the thirty years that the state constitution has permitted their adoption. Approximately one third of the cities with populations exceeding 50,000 have home rule charters.

Charter Provisions for Education

Many of the features of home rule charters are beyond the scope of this paper.

— Paul Hadley, Photo

There are, however, frequent provisions dealing with education in its relations to city government. Such provisions may be found in the constitutions, the statutes, or the charters themselves.

Many of the constitutional provisions limit the extent of home rule government over education by referring to such vague terms as "local affairs" as in Wisconsin; "municipal affairs" as in California; or "powers of local self-government" as in Ohio. Consequently, when a charter provision deals with education and becomes an object of litigation, the courts must assume the responsibility of interpreting the meaning of such terms. In general, the courts have maintained that education is not a local affair, unless it is designated as such by the constitution or statutes of the state.

The home rule law of New York is more specific with reference to education: "Notwithstanding any provision of this chapter, the local legislative body of a city shall not be deemed authorized by this chapter to adopt a local law which supersedes a State statute now in force or hereafter enacted by the legislature, if such local law . . . applies to or affects the maintenance, support or administration of the educational system in such city. . . ."[3]

Oklahoma and California provide examples of states which sanction by constitutional or statutory provisions the authority of cities to include in their home rule charters certain provisions applicable to city school systems. The legislature of Oklahoma may confer upon charter cities the authority for "fixing the number of the members of the board of education . . . and regulating the time and manner of electing the members of such board of education."[4] An amendment to the constitution of California similarly provides that: "It shall be competent, in all charters framed under the authority given by section eight of this article, to provide . . . for the manner in which, the terms for which the members

---

*Director of Secondary Education, Jackson, Miss.

[1]Howard Lee McBain, *The Law and the Practice of Municipal Home Rule*, p. v (New York: Columbia University Press, 1916).

[2]Arizona, California, Colorado, Maryland, Michigan, Minnesota, Missouri, Nebraska, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, Washington, Wisconsin.

[3]*Laws of the State of New York*, 1924, chap. 363, art. II, sec. 21.

[4]*School Laws of Oklahoma*, 1933, art. VI, sec. 117.

of boards of education shall be elected or appointed, for their qualifications, compensation and removal, and for the number which shall constitute any one of these boards."[5]

Supremacy of General School Laws

Many of the charters of California cities have not limited educational provisions to those authorized by the constitution but have included many items for which there is no legal sanction and which obviously conflict with state laws. In recent years the California courts have shown no hesitancy in declaring many of the charter provisions dealing with education as unconstitutional.

Most home rule charters stipulate that their educational provisions are concurrent with or limited by the constitution and general laws of the state. The charter of Beaumont, Tex., however, exemplifies a contrary stipulation: "The city of Beaumont shall constitute an independent school district, subject to the general laws of the state applicable thereto, except where in conflict with this charter."[6]

Numerous court decisions[7] definitely determine the supremacy of general laws over conflicting home rule provisions, particularly in matters pertaining to education. The influence of the court decisions in guiding local law makers is evidenced by the fact that the newer home rule charters contain fewer provisions dealing with school affairs than do the home rule charters of earlier origin.

SPECIAL ACTS CHARTERS

The term "special acts charter" is inventive for the purpose of classifying city charters which do not fall within the category of home rule charters. As far as this report is concerned a "special acts charter" is a law or group of laws by state legislative enactment relating to a specific city which create that city, or define and regulate its powers and prescribe the mode of their exercise. In general, a home rule charter results from local legislation permitted by the state constitution, whereas a "special acts charter," although applicable to a particular city, finds its origin, enactment, and amendment under the exclusive control and action of the state legislature.

Frequently the original charter of a city which marks its incorporation is supplemented by special legislative acts which for all practical purposes become part of the city charter itself. Cities of Massachusetts and other New England States have such charters. A common practice is to present the original charter and add the subsequent special acts in chronological order. It is not uncommon for the city charter to be amended at each session of the legislature. City officials themselves frequently undertake to compile the special acts and amendments thereto into a single document, which is commonly referred to as the city charter.

Many of the cities which have been granted "home rule" have embodied many of the provisions of an earlier special acts charter into the home rule charter. The present home rule charters of Texas cities are illustrative.

In most instances constitutional prohibitions of special legislation, when adopted, have repealed existing special charters. Milwaukee, however, provides an exception. The city of Milwaukee was incorporated and granted its first charter in 1846. From time to time the original charter was revised. In 1892 Wisconsin adopted a constitutional amendment which prohibited the legislature from passing any special legislation to amend, alter, or repeal any special charter, but did not repeal the existing Milwaukee charter. All subsequent amendments to the charter, however, are the result of general laws, either applicable to the entire state or to all cities of the first class. Thus the charter of Milwaukee contains all the original provisions and amendments embodied in Chapter 184, Laws of 1874, supplemented by all general laws affecting the city of Milwaukee.

How Special Acts Charters Control Schools

In general, special acts charters contain more provisions dealing with education than do home rule charters. Obviously the reason for this is because, with rare exceptions, the constitutional provisions granting "home rule" designate education as a function beyond the pale of local legislation.

Unlike the home rule charters which are superseded by general laws, special acts charters control when their provisions are inconsistent with the general statutes.

Where the city charter is merely an act or compilation of acts of the legislature conferring special powers upon a particular city it does not necessarily follow that such a charter is superseded by a general state law when the two are contradictory. An illustration is provided by the Connecticut courts. The special acts charter of the city of New Britain[8] provided that all vacancies in any office "shall be filled by the council." The general laws,[9] on the other hand, provided that the school committee "shall fill vacancies in their own number." The court settled the issue by saying, in part: "A vacancy in the school committee is properly filled by the council; the provisions of the charter is consistent with the general statute controlling."[10]

GENERAL CHARTERS

The ill effects of special legislation for cities have been realized for several decades. Consequently, a majority of the state constitutions prohibit legislatures from enacting special laws for cities.

Over one third of the cities with a population exceeding 50,000 have neither home rule charters nor special acts charters, but are governed by the general laws enacted by their state legislatures. For convenience in contrasting with special charters, the laws applicable to such cities are termed "general charters."

The cities thus affected are usually governed by a system of classification and general laws. In some instances the law may apply to a single city; in others it may apply to many. Since classification of cities is most frequently based upon population, the narrowness of the population limit often determines the number of cities affected by a general law. Philadelphia is the only city of the first class in the state of Pennsylvania. Similarly Indianapolis, Louisville, and St. Joseph (St. Louis and Kansas City are not classified.) are the only cities of the first class in their respective states. Cities in Nebraska with a population exceeding 100,000 belong to the Metropolitan class; Omaha is the only city which qualifies. Illinois passes general laws which are applicable to cities over 500,000 population; obviously the only city thus affected is Chicago. Likewise laws passed for cities over a million population in the state of New York can only apply to New York City.

City Classifications and Charters

From the above it becomes apparent that it is possible for legislatures to pass special laws affecting individual cities despite the fact that state constitutions specify that special legislation is prohibited. It is a simple matter for legislators to draft a bill in which terms such as "all cities of the first class" and "all cities with a population over 500,000" are inserted instead of the names of the cities, "Philadelphia" or "Chicago." The effect of the law upon the city is the same in either case even though in the former it is termed "general law" and in the latter as "special law."

Several illustrations may be given to indicate how states have maneuvered to pass special legislation under the guise of general legislation. In Pennsylvania, cities are classified as "first," "second," and "third" according to population. In order to provide a separate classification applicable to the city of Scranton exclusively "Second Class A" was added. An interesting class-

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[5] *Constitution of the State of California, art. XI*, sec. 8½.
[6] *Charter of the City of Beaumont*, 1919, sec. 66.
[7] *Matter of Nowak*, 184 Cal. 701, 195 P. 402; *Stern* v. *City Council of Berkeley*, 25 Cal. App. 685, 145 P. 167; *Esberg* v. *Badaracco*, 202 Cal. 110, 259 P. 730; *Barthel* v. *Board of Education of the City of San Jose*, 153 Cal. 376; *Bannerman* v. *Boyle*, 160 Cal. 197; *Law* v. *San Francisco*, 144 Cal. 384; *In re Wetmore*, 99 Cal. 146; *McKee* v. *Edgar*, 30 P. (2d) 999; *Gerth et al.* v. *Dominguez*, 34 P. (2d) 135; *Board of Education of the City of Ardmore* v. *State ex rel. Best*, 26 Okla. 366; *State ex rel. Friend, County Attorney* v. *Cummings et al.* 147 P. 161; *Board of Education of City of Minneapolis et al.* v. *Houghton*, 233 N.W. 834; *State ex rel. Wallen* v. *Hatch*, 82 Conn. 122, 72 Atl. 575; *Phelp* v. *Prussia*, 141 P. (2d) 440.
[8] *Special Acts*, 1905, p. 915.
[9] *Gen. St.*, 1902, Art. 2218.
[10] *State ex rel. Wallen* v. *Hatch*, 82 Conn. 122, 72 Atl. 575.

President Truman Signs School Lunch Act, June 4, 1946.

The National School Lunch Act has become definitely a law and will go into effect with the opening of the fall school term. The Act does not fix the amount of the subsidy to be given as planned originally at $50,000,000 and at $100,000,000 in the Senate. The law provides for such amounts as may be necessary and it is expected that Congress will appropriate about $75,000,000 each year. The law provides $10,000,000 for buying kitchen equipment but allows no funds for training school lunch managers or for the teaching of nutrition, etc.

The U. S. Department of Agriculture will provide regulations in time for use in September. Under the bill, the United States will provide $1 for aid for every $1 spent by the states from 1947–50; $1 for every $1.50 from 1951–55; and $1 for every $3 thereafter. Private as well as public schools, of high school and elementary school level, will be eligible for funds.

---

ification exists for cities in California. Cities between 500,000 and 550,000 belong to the first class; those with a population more than 550,000 belong to 1½ class; cities between 100,000 and 500,000 to 2 class; cities between 70,000 and 100,000 to 2¼ class, etc. It should be said, however, that this classification is of little use since most of the cities are governed by special charters. The earlier laws of Illinois referred to "cities over 100,000 population" intended as applying only to Chicago. Since Peoria has attained a population in excess of 100,000 the population clause intended for Chicago has been changed to "all cities over 500,000 population."

Classification of cities by population affects the organization of city school systems where the laws specify that the city school districts of a particular class or within a definite population range shall be governed in some special manner.

In numerous instances city school districts have a scheme of classification which is different than that of the civil city. The cities of Indiana are classified as: first, 250,000 or over; second, 35,000 to 250,000; third, 20,000 to 35,000, etc. School board organization in Indiana cities, however, is determined on a population basis different from that of the city; for school purposes Indianapolis is classed as a city with "more than 300,000 inhabitants";[11] Fort Wayne is referred to by "cities having a population of more than 110,000 inhabitants and less than 200,000 inhabitants";[12] Gary is the city affected by "cities having a population of more than 70,000 inhabitants and less than 102,000 inhabitants";[13] and the rigid classification of "cities having a population of more than 103,500 inhabitants and less than 114,000 inhabitants"[14] is applicable only to South Bend.

[11] *Acts*, 1931, p. 291.

[12] *Acts*, 1921, p. 120.
[13] *Acts*, 1931, p. 524.
[14] *Acts*, 1931, p. 122.

Courts and City Classifications

Where special legislation is prohibited, laws which are applicable to cities of a particular class have frequently been challenged. The courts sanction the application of law by classification if fairly and reasonably applied.

Numerous Wisconsin adjudications hold that "classification of cities according to population for the purpose of legislation is valid if the object of the legislation bears a fair relation to the difference in population.[15]

A decision reached by the Indiana courts declared that an act "concerning common schools in cities having a population of 100,000 according to the last United States census is an act of general application, and is constitutional, though at the time it was enacted there was but one city in the State containing such population."[16]

The Ohio courts declare that school laws must have a uniform operation throughout the state[17] but hold that classification according to cities is constitutional.[18]

Philadelphia is a city of the first class with a population over one million, and Pittsburgh is a city of the second class with a population between 500,000 and one million. Both cities, however, represent school districts of the first class by virtue of populations exceeding 500,000. An act of the legislature which provided for a method of appointing school directors for districts of the first class was challenged as unconstitutional, but the courts upheld the constitutionality upon the prevailing system of classification.[19]

[15] *Johnson* v. *Milwaukee*, 88 Wis. 383, 60 N.W. 270; *Boyd* v. *Milwaukee*, 92 Wis. 456, 66 N.W. 603; *Adams* v. *Beloit*, 105 Wis. 363, 81 N.W. 869, 47 L.R.A. 441; *Wagner* v. *Milwaukee*, 112 Wis. 601, 88 N.W. 577; *State* v. *Trustees*, 121 Wis. 44, 98 N.W. 954.

[16] *Campbell* v. *City of Indianapolis*, 155 Ind. 44.
[17] *State* v. *Powers*, 38 O.S. 54; *State* v. *Shearer*, 46 O.S. 275, 20 N.E. 335; *State* v. *Spellmire*, 67 O.S. 77, 65 N.E. 619.
[18] *State* v. *Brewster*, 39 O.S. 665; *State* v. *Board of Elections*, 16 C.C. 1, 8 C.D. 215.
[19] *Minsinger* v. *Rau*, 236 Pa. St. 327, 84 Atl. 902.

Even the kids talk in big figures. A local grade school youngster offered to bet an octillion dollars that he was right.—*Atchinson County Mail.*

Juvenile delinquency is when children act like their parents.—*Mound City News-Independent.*

Keeping the Board Members Informed

*R. O. Borreson**

"Keep your board fully informed" has been the constant admonition of those who have contributed to literature in the field of educational administration. Engelhardt, who 15 years ago wrote, "These responsibilities on the superintendent necessitates action on his part whereby the members are kept in touch with the work of the school,"[1] finds no dissenting voice in the more current Reeder[2] who lists the materials which the wise administrator will furnish his board members. The need for an informed board is obvious and yet, while this counsel is almost platitudinous, we occasionally find instances of failure correctly attributable to omission of a plan for enlightening the board members.

Board Members' Manual

It may be of interest to schoolmen to know about the adaptation of some techniques, in addition to the conventional ones, which the writer has found helpful in imparting information to individual members. One of these is a school board members' manual, or handbook, which incorporates within one folder a reasonably complete collection of highly condensed data on the school. The resourceful administrator will, of course, prepare his own manual and make it adaptable to the system, but there are a number of items which will probably be included rather generally.

The manual should, by its nature, include a statement of the duties of the board members and the superintendent. Occupying a prominent place will be the regulations outlined for the functioning of the board and a statement of the basic principles of education which the board endorses.

OTHER TYPICAL ITEMS IN MEMBERS' HANDBOOK: (all condensed)

Description of school district and property
Summary of the budget
Trends in expenditures
Trends in receipts
Enrollment trends
Teaching assignment and schedule
Curriculum
Teacher requirements
Salary schedule
Retirement schedule
Bond schedule
Transportation, pupils and costs
Statement of insurance coverage

The physical aspects of the book will vary, but it will probably consist of duplicated pages enclosed in loose-leaf or similar binding. As is readily apparent, the manual should occupy a place in the board meetings and be available for quick consultation, as matters bearing on the operation of the school require reference to basic and factual material. It is not necessary to elaborate on the functional value of such a manual, as an administrator knows how frequently it is necessary during a meeting to refer to his own records, but having only one copy normally of such a record, he knows too how time consuming it is when members desire to check the record.

In addition to providing one copy for each member at meetings, the service of the manual will be greatly enhanced if extra copies are prepared for the members to keep in their homes or at places of business. This provision will make them available at all times to answer basic questions on the school's operation, and it will of course preclude the necessity of carrying manuals about. Their value will be further augmented by keeping them up-to-date, which is no more complicated than removing outdated pages and inserting corrected ones when data become available.

Letters to Members

Another device which has met with approval is the personal letter to members of the board. A variation of this, taking the form of an agenda for the forthcoming meeting, has had fairly extensive usage, but the personal letter as a medium for imparting information to the board member is not widely used. The probability here is that the obviousness of a personal letter has precluded its general adoption.

The letter which we find most effective is highly personalized, being typed to a particular individual, informal and friendly. Naturally it should contain only items of interest, fact, and importance. For the most part, these will consist of matters having to do with the everyday operation of the school, about which the superintendent wishes to advise the members, yet which may not be sufficiently important to justify immediate action by the board or even discussion at a meeting.

Looking back on letters to the board, we find that we have mentioned such items as illness of teachers, the spread of disease in the school, some recognition or achievement which we desire to mention prior to its appearance in the press, events scheduled, items which should be discussed at the next meeting, estimates on new teachers, mention of trends in population, transportation and enrollment recently observed, acquirement of new equipment, important visitors in the school, the new legislation or new interpretation of court decisions on school law.

Our experience has indicated that letters are manifestly valuable when they are of a personal nature, and while members are cognizant that identical letters are sent to all, there is a closer and more understanding contact. We believe the value is heightened by making such letters relatively brief and sending them as occasions arise rather than at scheduled time intervals whether or not there is justification from the point of content. The obvious advantage of the letters is their timeliness, but in addition, they contribute to the member's feeling of awareness as well as his understanding.

Summarized Reports

The writer also makes frequent use of simplified one-page reports on school affairs for presentation at board meetings. These are condensed statements of financial aspects of sports, plays, music activities, and all forms of endeavor in which money is to be accounted for, mainly through the activity fund. This device is also helpful in making monthly reports on educational programs, transportation changes, enrollment, and the like; items which are best presented graphically and which in themselves do not normally figure in the annual report. Here again the objective is to present quickly and in concise form material of which the board should have knowledge. The administrator benefits not only from the increased enlightenment of board members but also from their feeling of having a closer understanding. An incidental by-product of this is the greater comprehension of the many ramifications of a superintendent's work.

The writer makes no claim for originality for any of the media used, but believes that they may be utilized by others in the form described or a variation of it, to the end that board members will be more effective through better understanding.

Shall We Make it Compulsory?

I wonder how long it will be before we hear the first rumblings of the demand that adult education shall be made compulsory. The argument is very clear: that you cannot be a good citizen and a voter and a judge of difficult questions unless you are instructed and studious, with brightly burnished and thoughtful dome. When the teachers have used up what fragment of childhood and adolescence remain to be appropriated, they will find themselves, in their imperialistic urge and quest for raw materials, bound to look to the unannexed continent of the middle years of life. — *The Tablet*, London.

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*Superintendent of Schools, Corning, Iowa.

[1]Engelhardt, Fred, "Public School Organization and Administration," p. 94, Ginn and Company, 1931.

[2]Reeder, Ward G., "School Boards and Superintendents," p. 9, Macmillan, 1944.

Organizing a School Radio Station

A. T. Stanforth[1]

Probably the first public high school owned and operated FM radio station in the country is getting underway at Sewanhaka Central High School, Floral Park, N. Y. A construction permit has been granted the Sewanhaka High School Board of Education by the Federal Communications Commission, Washington, D. C., and much of the actual construction work for the new station is being done by students in the school.

Sewanhaka High School, located in the New York metropolitan area, is organized as a comprehensive institution and offers a wide range of vocational, technical, and academic subjects. Enrollment in the day school is 3100 from grades 9 to 12, while a thousand adults are enrolled in the evening division. The population of the school district is approximately 55,000 people living in an area of 17¼ square miles, mainly residential, lying directly east of New York City. There are eight fairly large elementary schools in the district and four parochial schools.

A frequency modulation system provides freedom from static, better fidelity, and permits more stations on the same frequency band. The Sewanhaka station will have a frequency between 88 and 108 megocycles in the new FM band. The station will be equipped with a 250 watt transmitter and will have a radius of about 20 miles.

A daily broadcast provides each of the 95 homerooms in the school with the announcements of the day and the news which is likely to be of interest and value to teachers and pupils.

Preliminary Development of the Station

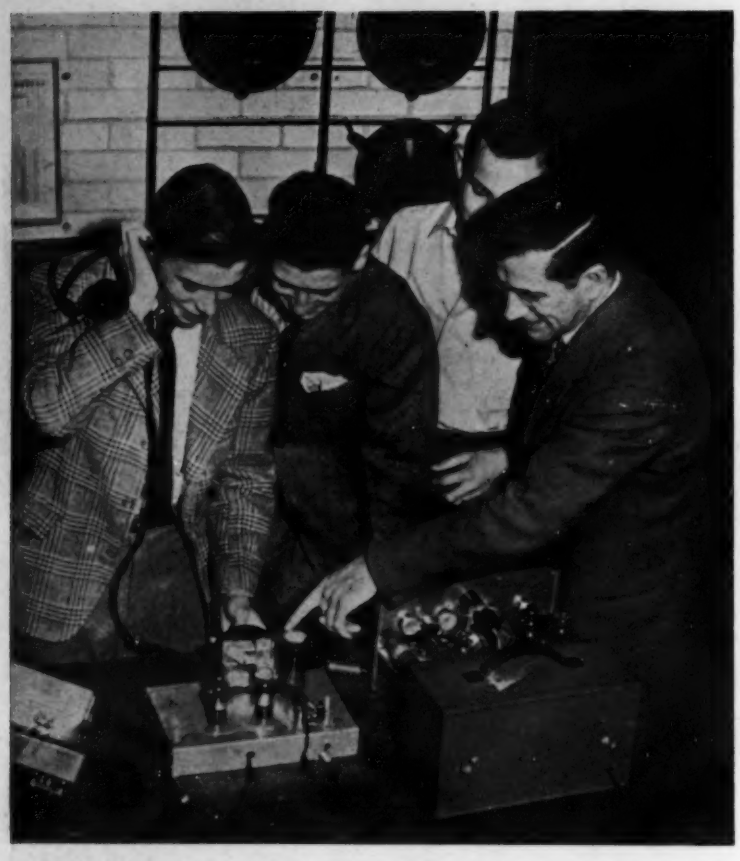
The school has owned and operated a Central Public Address System for several years over which school news, announcements, and occasional short radio plays were presented. This led to the introduction of a class in radio technique, although little equipment and facilities were available. When the campus area was expanded, the school acquired a small bungalow which was converted into a radio cottage. Students, with the help of custodians converted the cottage into two studios, a control room and a reception-recitation-room. Microphones and an amplifying system made it possible to simulate broadcast conditions and to follow professional procedures. It was also possible to broadcast programs to the reception room for the critical appraisal of other members of the class.

Acoustical qualities in the new studio were deficient, so students raised money and draped the walls with monk's cloth. Other students constructed sound effects and still others purchased sound effect records. A school custodian donated a piano. Recordings of some of the class programs were made on a small portable machine, and a short time later students of the school raised funds for the purchase of a professional model recorder. At this time, students in the technical electricity class are busy constructing an antenna for the radio tower. Students are also building three remote pickup amplifiers. All control wiring and tie lines which are being supplied are being installed by students.

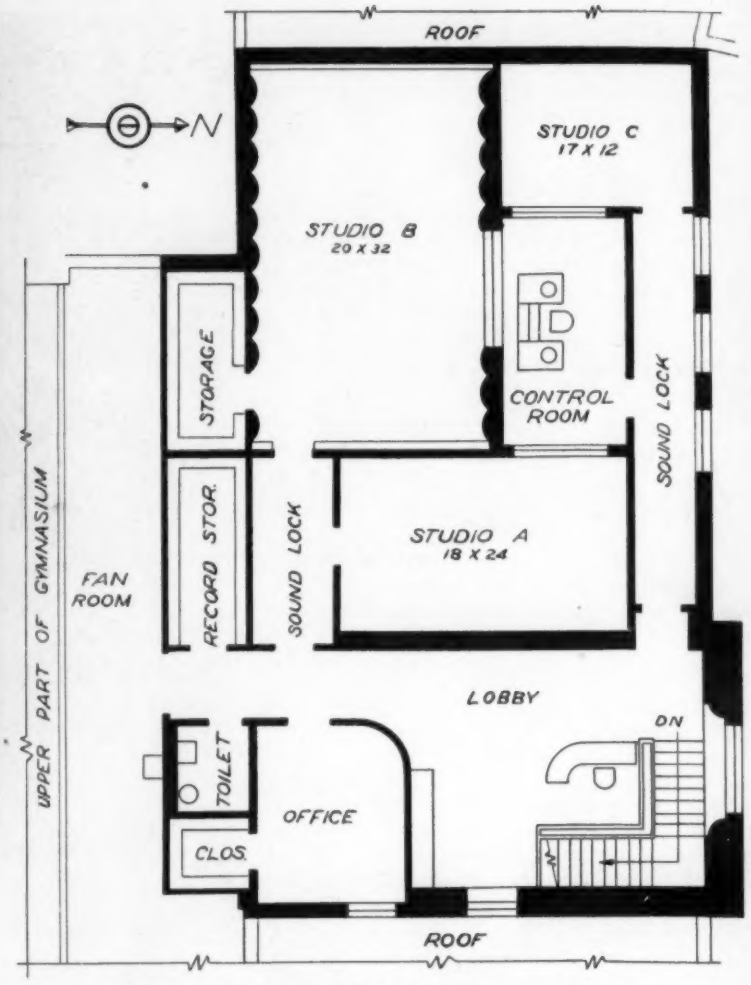
Students' interest in radio was reflected in the community and a citizens advisory committee was appointed by the board of education. Several members of the committee are directly employed in radio fields, some as technicians, others as executives, while one member is a program director in a near-by radio station. The committee has been helpful in securing government surplus material in constructing the station.

A bit of a studio audience as seen through the glass partition.

[1]Supervising Principal, Sewanhaka High School, Floral Park, N. Y.



Led by the electrical instructor the students in technical electricity construct the radio antenna.



Plan of the Sewanhaka broadcasting unit.

Plans for New Studio

Three new buildings are planned for Sewanhaka High School and a new broadcasting studio has been planned in some detail. The layout for the new studio shows an office, a fairly large lobby, three studios, a control room, and storage space. The plans were drawn by Frederic P. Wiedersum, the school architect.

The major parts of the station are as follows:

1. Antenna, tower, coaxial transmission lines and impedance matching devices
2. Transmitter
3. Frequency monitor
4. Modulation monitor
5. Audio control apparatus
6. Transcription turntables
7. Microphones
8. Remote pickup amplifiers
9. Modern recording apparatus

The antenna will be a single section, super turnstile and will be constructed in the school shops by students. A ⅞-in. gas filled coaxial cable is to be used between the transmitter and the antenna. The transmitter is a 250 watt unit with an output frequency in the new FM band.

Monitor units will be used for checking the output of the station at all times. Periodic checks on frequency will be made by a near-by station.

The complete audio input system will be controlled by a consolette. This unit provides all switching, fading, and cuing controls for three complete studios and several remote pickup circuits. It also provides controls for program rehearsing.

Three remote pickup amplifiers are to be built in the school laboratories. The units are for use when broadcasting programs from the auditorium, music rooms, gyms, or athletic field.

A steel tower, 110 feet in height, has been secured from the Federal Government.

Cost of Equipment

The following are estimates of equipment costs based upon present prices: one 250 watt transmitter, $4,500; one combined frequency and modulation monitor, $800; one special input consolette, $975; one portable recorder, $665; coaxial cable, $175; two table microphones, two stand microphones, and one American Bolix microphone, with wiring, $800; amplifier, $200; master control board and equipment, $300; Magnivox projector—Magnivox senior, $300; five loud-speakers, baffles, and matching transmitter, $200. In addition to the above costs, studio furniture and equipment must be provided as well as salaries to be paid the station manager, radio operator, and engineering costs. The latter is a minor charge in most cases since this service can be secured when needed from the nearest radio station. Thus, it is possible to purchase the necessary equipment for a small FM school station for approximately $10,000. Once the station is constructed, operation costs may be held to a small budget. Naturally, the station must have a manager who, in most instances, will be the teacher in charge of radio classes. Some clerical assistance is necessary and this may be secured from the secretarial classes in the school. Heat, light, power, and building maintenance must also be provided, as well as occasional engineering inspection service.

The school broadcasters use all the techniques of commercial broadcasters to entertain their studio audiences.

Technical Operation

The rules and regulations of the Federal Communications Commission require that every radio transmitter be attended by a properly licensed operator. In the case of a broadcast station, a first-class radio-telephone license is required.

Examinations for all classes of operator licenses are administered by the Federal Communications Commission. The first-class radio-telephone examination is given in four parts or "elements," each of which must be

passed with a grade of at least 75 per cent. The elements are: (1) laws governing radio communication; (2) basic radio theory; (3) elementary radio-telephone theory; (4) advanced radio-telephone theory.

Licenses are valid for a period of five years. At the end of that time they may be renewed: (1) by retaking the examination; (2) without examination if the licensee has worked in a position for which the license is required for a total of three years within the period of the license; or (3) without examination if the licensee has worked continuously in a position for which the license is required for the last 12 months of the term of the license.

Radio Courses in Curriculum and Co-ordinate with Radio Work

In the Sewanhaka High School a one-term course in radio script writing aims to provide material for use during the daily broadcast from Sewanhaka's FM station. The course will consist of instruction and practice both in the adaptation of short stories and biography excerpts, and in the production of wholly original scripts. It will also cover the various types of continuity writing. It is open to juniors and seniors who have had at least one term in creative writing or to any student whom the instructor considers qualified.

The Radio Technique Class is devoted to speaking for radio (pronunciation, diction, expression, modulation, quality, etc.); types of speaking: announcing, interviewing, newscasting, sports announcing, narrating, etc.; recording and voice analysis; common radio terms and their meanings; microphone technique; radio drama and acting; program analysis and evaluation from scripts, recordings, and radio programs; program planning and production; continuity writing; script writing; studio procedure — rehearsal and timing techniques, operation of studio equipment; recording techniques; wire, disk, lateral, vertical; operation of recording and playback equipment; sound effects; construction and use, recorded sound effects; music for radio programs and licensing authorities; radio commercials, writing analysis, and delivery.

In addition a radio-workshop group is being organized as an extracurricular activity to provide additional instruction. This group will produce programs, train announcers, script and continuity writers, actors, sports and special events announcers.

Two Types of Programs

The programs to be broadcast over the school station will be of two types. The school will be on the air two hours before 6:00 p.m. for five days each week and two hours after 6:00 p.m. each day. During school hours the programs will be instructional in nature and designed to be used in the high school classes and all elementary schools. The audiences will be comprised of students. The second type of program will be broadcast after school hours to a varied audience and will consist of dramatic programs, student musical groups, sports and sport news, story programs, transcribed programs, music of general interest and other events of community interest. For the most part, students will present these programs.

The entire radio program is planned by a co-ordinating committee consisting of representatives of both high and elementary schools.

The studios are equipped with homemade gadgets for practically all types of sound effects.

The general committee is divided into small-subject-area groups. A small committee of three will act as a general policy committee for the whole program.

VISITING DAYS STILL PAY DIVIDENDS

Dr. Lawrence A. Barrett*

If you find that the incoming students into your senior high each fall seem dazed for a few weeks till they "get onto the ropes" of the school, why not alleviate the situation by having a visiting day in the spring?

The Salida, Colo., high school has found that such visiting days pay big dividends both in the percentage of pupils who return to the school in the fall and also in the way they fit into the system when they do come to school.

The Salida schools invite all the rural eighth graders in the county including those from the near-by eighth grade at the parochial school and ask them to spend an entire day as guests of the senior high. The visitors are asked to assemble on visitors' day in the school auditorium where a short program is staged for them by students of their own age. Afterward they are introduced to guides who stay with them the entire day. Visitors are divided into parties of about ten each. The groups then proceed to visit the typically freshmen classes in the senior high. Algebra, general mathematics, English, science, shop, band, study hall, home economics, Latin, Spanish, and other typically freshmen classes are inspected during the day and each group visits long enough to get some little notion as to what is going on in each room.

At noon, the youngsters have a luncheon in the home-economics classroom and then start out and visit classrooms all afternoon. Near the close of the day they again meet in the auditorium with the principal at which time questions about senior highs in general and the Salida school in particular are asked.

Each teacher, of course, needs to co-operate in making the visiting day a success and should plan something of a lesson that would show off his or her department to best advantage. For instance, there is no use to take a group of visitors into an algebra class if the instructor is going to have a written test on factoring the entire period. On the other hand, some well-chosen demonstrations in science, a style show in home economics, a short play in English, and things of that type help "sell" the senior high to the visitors.

In schools where the senior high and the eighth grade are housed in separate buildings and where a large number of rural schools send youngsters into the ninth grade, there is bound to be a "gap" and sometimes timidity may prevent some eighth-grade pupils from coming on to the next part of their educational program. The visiting day idea will do a great deal to bridge that gap.

The Salida schools go another step and have a similar "sixth grade" day at which time the sixth graders from the city's two elementary schools visit the junior high for a time. They see where the various classes meet, they watch the classes in action, they meet the teachers and the principal and thus usually "can hardly wait" till they also can come into the next school.

Still another step which can help is that of having the mothers of pupils who will start to school in the first grade in the fall bring their youngsters with them and spend an afternoon in visiting the school's primary rooms. The first graders there can "show off" by demonstrating how they can read, spell, count, and play games while mothers will get a chance to see what they may expect their children to be doing a year hence.

*Supt. of Schools, Salida, Colo.

Your School System and Intergroup Education

William M. Lamers, Ph.D.[1]

No development in education currently is receiving more attention from schoolmen and public than intergroup or intercultural education. Some school systems are getting organized for themselves in this field. Others are making use of a number of servicing agencies of which the outstanding is Intergroup Education in Co-operating Schools, a department of the American Council on Education. Recently an excellent yearbook edited by Dr. Hilda Taba and William VanTill has been published in this area. A group of teacher training institutions is undertaking to give their pupils competence in dealing with the problems of intergroup understandings. This summer for the third year outstanding workshop courses are being offered in leading colleges and universities. It is apparent that the educational forces of America are girding themselves for a campaign to improve American intergroup and intercultural understandings.

The Problem Not New

In spite of the present strong emphasis, the problem clearly is not new. From the beginning, our country has been a curious and unprecedented conglomerate of many persons, peoples, religions, races, colors, conditions. In selecting the motto, *E Pluribus Unum,* the founding fathers probably were taking recognition of federal unity out of the multiplicity of the federated states. If, however, they were seeking a phrase to describe the diversity of persons and conditions that form America today they could scarcely have done better. As a nation we have been a composite of many groups and cultures for better than three centuries — and at no time have we been without troublous and thoroughly understandable growing pains resulting therefrom. Sober faced Plymouth *vs.* rollicking Merry Mount. Tories *vs.* patriots. Indians *vs.* white people. Immigrants *vs.* nativists. No-nothings *vs.* a half dozen other groups. Abolitionists *vs.* slaveholders. Federalists *vs.* antifederalists. Freethinkers *vs.* joiners. Deists *vs.* theists. Cavaliers *vs.* Roundheads. The old Klan *vs.* Negroes. The new Klan *vs.* Negroes, Catholics, and Jews. Almost everybody at sometime or other, in some way or other *vs.* somebody else. But out of the differences and strains has emerged a good nation that for the most part through more than a century and a half of independence has managed to get together sufficiently on major issues to meet a succession of challenges in an unfriendly world. Probably, too, we have achieved a better nation than might have been produced if instead of being the inheritor of multifold cultures it had stemmed narrowly from one. In any event it would be both unwise and unhistorical to assume that intergroup problems are uniquely the concern of our disjoined, disillusioned, maladjusted, and sordid times.

The historicity of intergroup chafing, however, should not blind us to the fact that there exists presently considerable need for the kind of educational program that is now being entered upon. I see a number of reasons why we should meet the intergroup challenge of our day: (1) A decent state of intergroup harmony is essential to our happiness, our social well-being, our civil order, and our prosperity. Most of us are uncomfortable in the presence of those who are uncomfortable. (2) A decent state of intergroup harmony is essential to our national safety. As a practical consideration we should remember that recruits for subversive activities are more readily made from among those who are maladjusted, frustrated, unhappy, than from contented citizens. (3) A decent state of intergroup harmony at home is essential to the adequate leadership of America in world affairs. It smacks of hypocrisy for a nation to raise disapproving eyebrows or to rend garments and shout, "Unclean," at other nations because, a little more aggressively perhaps, they stir up conditions in their front yards or across the street which she tolerates in her own back yard.

And lest someone immediately object that he lives in a community in which there are no major problems and which therefore needs no intercultural program, may I suggest that there are many reasons why it is difficult for any school in America to deny the necessity for dealing at least with the long range aspects of this problem. For one thing we are a nation of movers. The child who today sits in a classroom in Oshkosh, Wis., ten years from now may be first citizen of Biloxi, Miss. For another thing, very few communities are thoroughly homogeneous, and even those few have no guarantee of long homogeneity. The community that is 100 per cent whatever it may be today, tomorrow may find itself with a racial, color, or religious program by virtue of the one or 100 Smith families who have moved into the trailer camp — or in the best homes on Grand Boulevard. It is necessary, too, that American citizens have the understandings, appreciations, and social skills for living in the one United States of America and in what we are progressively calling — rightly or wrongly — the one world, because, whether we like it or no, consider it inevitable or not, our directed national thinking and our recent history have been making the small town shoemaker in Indiana next door neighbor to such different persons as Indian Fakirs, Sulu chieftains, the British hereditary nobility, Chinese bandits, New Hebridian cannibals, and Himalayan yak tenders.

Areas of Intergroup Misunderstanding

While intergroup misunderstandings may take place whenever there are intergroup differences — and the possibilities for these are to all practical purposes infinite — there are certain areas which must be recognized as major, either because of their extensiveness, or because of the critical problems they create. These major areas of misunderstanding arise out of differences in color, race, religion, economic and social status, local origin.

Intergroup Misunderstandings: A Problem in Social Psychology

One does not need to be learned in the anthropological or psychological approach to problems in group psychology to appreciate the manner in which intergroup misunderstandings have their genesis and functions. The ancient wisdom of the race knows that we do not like that which we do not understand. With some oversimplification the whole problem of intergroup misunderstanding could be summarized in two words: *Unlike — dislike.* It should be particularly stressed that the second phenomenon, that of dislike follows upon the first, that of unlikeness, particularly when there are other circumstances that contribute the element of fear. The Japanese are an instance in point. In California where they formed a major group entering into economic competition with the whites they were apparently feared and hated as a group. In Milwaukee, where a few have been resettled and they do not constitute a problem of competition for jobs, they are accepted and affectionately regarded as individually they merit affectionate regard.

In any program for the improvement of intergroup relations in the United States we should put some thought into what is meant by likeness and unlikeness. Manifestly there are certain factors of unlikeness about which we are not going to do very much in a program that will extend, let us say, over one lifetime. Whatever may be the implications of the Mendelian theory of dominance and recession, within the next hundred years we are not going to change the complexions of American citizens so that at the end of the period they will all be black or white, or some in-between shade. Under our present concepts of individual liberty as set down in the Bill of Rights we are not going to make minority groups in religion conform to the religious pattern of the majority — if there is such. The matter of economic class is much less inflexible. But it is scarcely the proper material for school treatment, except in so far as the school may offer ways and means by which people may assuage their wounds, compensate for their differences, and change their economic status through education. It is doubtful, under any

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circumstances, whether in the total ideal American pattern of social life one would wish grimly to produce an average or a universally dominant pattern in matters of conduct.

Complicating the problem in social psychology is the further fact that any one of us at any time represents many patterns, by the possession of which we are identified with many groups, some of them cutting across one another. For instance, while I am at a political rally I am likely to have the pattern of my political preferences dominate, and to have a fine fellow feeling for those who sit around me. But on leaving the rally I perhaps go to one church, and the man who sat next to me to another, and from the standpoint of religious institutions there may be small fellow feeling between us. It has been said rather well that there is no one group that somewhere or other is not a minority.

Educators, too, should ask themselves as a guide and curb to their thinking in intergroup understanding certain questions about the worth-whileness of group patterns. Is the local majority pattern correct because it is the majority? Is the national majority pattern equally correct in all things because it is the national majority pattern? Without examining my limited historical backgrounds very thoroughly I can think of an excellent instance of a pattern which was consistent with its own time and which was almost universally accepted in the locality but, which definitely would not now be considered even good Americanism. I refer of course to the religious pattern of intolerance to be found in the early Massachusetts colony, a pattern which scattered the Anglican laughers of Merry Mount and which sent Roger Williams to Rhode Island and exile. The patterns that we set for ourselves nowadays should not therefore be accepted without close scrutiny. Our common sense should tell us that in minority as in majority patterns frequently there are elements that could better be eliminated, not for the sake of conformity with one another so much as for the sake of conformity with the ideal commonweal.

It should, then be clearly borne in mind that the purpose of a program of intercultural understandings is not to destroy the smaller groupings, provided their patterns of thinking, feeling, and acting are not subversive of the whole group pattern, nor to level them to the group pattern, nor to strike an average. It should also be remembered that intercultural understandings are not necessarily the problem of minority groups alone; that sometimes decent citizenship demands that a majority group make an effort to understand minorities.

Problem Not Entirely a School Problem

Manifestly intergroup understanding is proper subject matter for education in a public school system. But for educators to feel that on their shoulders rests the whole responsibility for achieving proper intergroup living is unrealistic thinking. For one thing the school is only a single among many agencies with educational functions. The Church, the press, the radio, the theater, labor organizations, and fraternal societies in their educational programs — all agencies with educational functions — have their jobs. The school touches directly only the children — and these only a portion of the time.

There are many aspects of the immediate problem that the school cannot presume to deal with. The school cannot build houses, inspect buildings, examine labor contracts, compel fair employment practices — to give only samples.

Two Programs of Intercultural Relations

The problem of intergroup understanding manifests a twofold need, calling for a twofold program.

In the first place, in some localities there are critical immediate problems demanding immediate solutions. These solutions constitute a remedial program. In the second place, over the nation at large and even in those schools in which there is an acute immediate problem, there is a need for a general long term program. This program is basically preventative. Schools can do much for the remedial program. I find the following eight functions suggestive rather than exhaustive: (1) The schools can create an atmosphere of friendliness between the competing groups. (2) They can supply examples of proper intergroup relationships in the daily living of staff members and pupils. (3) They can put forth an equality of opportunity for all without regard to color, race, or creed. (4) They can teach correct informations basic to intergroup understandings to take the place of incorrect informations. (5) They can sensitize students with reference to intergroup problems. (6) They can motivate acceptable intergroup behavior. (7) They can supply opportunities for proper intergroup living. (8) They can, within reasonable limits, make an effort to provide compensatory experience for intergroup incivilities received elsewhere.

The long term program performs rather the same functions carried out with less immediacy. It should sensitize students as to intergroup relations, give them ideals, patterns, and opportunities for living together according to those patterns.

Whether the program be short or long term it would be well for the educator to have in mind the fact that the best preparation for proper life tomorrow is proper life today. The major educational outcome for such program must be an immediate pattern of pupil response so that in the manner characteristic of their personal and social development they will deal with people of other cultures immediately and in an acceptable fashion.

The purpose of such educational program if it is to be achieved must therefore be kept well within the range of the limited understandings of the children and must create at every level such intercultural understandings as are needed and appropriate at that level. It is to be presumed that if such understandings are so created they will carry over into new and later situations to the degree which these situations have common elements with the original learning situation. In this fashion we will have the phenomenon of apparently delayed responses.

Outcomes of an Intercultural Program

All this of course places emphasis on outcomes other than mere informations. Now it is true that some part of intergroup misunderstanding is due to ignorance. In such case, of course, a partial cure would be correct information. If, for example, some person is so unacquainted with ethnology as incorrectly to believe that there is a progression of races in the human family with the Negro closest to the brute and the white farthest from him, then the need of ethnological information is clearly indicated. But the probabilities are that the ignorance is not unmixed with a host of emotional matters which in turn are complicated by deeper psychological conditions such as fears and frustrations. It has been my observation that sometimes the incorrect ethnological argument has been used as a rationalization rather than a reason. The old adage about "the man convinced against his will" seems to be pertinent here. While it is true that good intercultural education must stand squarely on accurate facts, it is likewise true that it must go beyond these into the more difficult realms of feelings, and that ultimately it must translate its program into habits and skills.

The End Educational Pattern

In discussing educational objectives it is always advisable to attempt to describe the end product in everyday language. How should the interculturally mature person act? The following list is suggestive rather than complete. That person is interculturally healthy who: (1) feels himself to be a dignified and important member not only of the several more restricted cultural groups to which he belongs but also of the whole group; (2) feels that the several groups to which he has allegiance are dignified and important groups within the framework of the whole group; (3) respects the beliefs and modes of activity of other groups as well as those to which he belongs; (4) suspends judgment on the worth-whileness of other cultures until he has some chance to know, understand, and evaluate their worth-whileness; (5) does not ask for himself what he is not prepared and willing to consider as equal rights or privileges to those of other cultures; (6) is able to participate with members of other cultures in the achievement of common worth-while goods.

The interculturally healthy group must maintain much the same relations to individuals in other groups and to the groups themselves.

While no one should imagine that the foregoing analysis is complete, its viewpoint is valuable for two reasons: (1) It emphasizes outcomes in terms of the learner rather than in terms of a paper program. (2) It emphasizes outcomes in terms of a broad learning experience, that is, in terms of attitudes, ideals, appreciations, habits, skills, as well as of understandings and informations. It is

worth while to insist again that informations are not enough, and that no school does its job thoroughly if it ends with precept and does not provide adequate opportunities for practice. Practice clarifies the precept, objectifies it in fact, defines the area of its application, and crystallizes it into psychological and physical habits. Unless habits have been developed under varying situations there is a strong likelihood that the intercultural training will die with the situation immediately at hand, and will not persist in new situations beyond the school.

To return to information. If it is true that some part of intergroup misunderstanding is due to ignorance, then the answer for that part of the misunderstanding would seem to be a program of correct information. Let me stress the term "correct." Misinformation is not the answer for misinformation.

Let us take the Negro problem, for example, and return to the matter of evolution. We have touched the point that the doctrine of racial progression is, of course, totally unscientific — ethnological, ethnographical, biological, anthropological nonsense. Is the cure indicated here information? Certainly not the entire cure, because men frequently believe not according to the facts but according to their wishes. If tomorrow I were to prove conclusively to the entire mental satisfaction of persons with such unscientific views that far from being lower in the evolutionary process the Negro is much higher than the white man, would the desired intergroup understandings immediately follow upon my submission of evidence? I gravely doubt whether they would. I gravely doubt whether the proper attitudes would come with reference to the housing problem. I gravely doubt whether the Negro would be any more welcome in certain industrial areas in which he is actively competitive with the whites. Nor would I be justified in my own mind in distorting the truth in the interest of a good cause. Of course people will immediately ask "What is the truth?" Well the truth is seldom to be found in propagandistic utterances on either side. Because by and large the poor Negroes who were dragged over on slavers were ignorant, and for whatever reason — pathetically I would say — have for the most part been educationally neglected in comparison with the whites, is it necessary now that we tell children of a great black university in the heart of Africa, and permit them to draw the unwise inference that here was a greater Bologna or Paris to which foregathered scholars from all portions of Africa, while the majority of our own white ancesters smeared themselves with mud and babbled like bushmen? Because in some quarters Catholics and the Catholic Church have been much maligned do we have to go the opposite extreme and put the nimbus on the occasional public sinner who eats fish on Friday?

The quality of being sharp in business dealings is no respecter of nationalities. There possibly have been and are shrewd Chinamen, Germans, Norwegians, Icelanders, Welshmen, Yankees, Canadians, Malayans who shaved pennies and conscience in business matters. Because the Jew belongs to a defined minority group that has been outrageously persecuted do we have to compensate for his sufferings by denying the fact that occasionally in fiscal affairs one has sinned through frailty and thereby proved that Jews as a group are pretty much the same as any other group?

Andrew G. Clauson, Jr., President, Board of Education, New York City, 1946–1947.

If men as individuals and groups would only adjust themselves to the best picture that the wishful thinking of other men — or their own — creates for them, then such distortion of fact might be justified as one device whereby folks could raise themselves by their bootstraps. But people being what they are, there is danger that the idealized or generalized stereotype may go to pieces when it is brought into comparison with reality. The stereotype of the Pollyanna variety with the worst carefully omitted, even though happier, may be just as false as the ugly stereotype painted by prejudice. The function of education should be neither to glamorize nor deglamorize, but to teach future men and women to face the truth honestly.

Steps in an Intercultural Program

The educational job of gearing a public school system into an intergroup education program from first to last would seem to include the following four steps:

1. The development of an appreciation by boards, staffs, and community of the meaning and worth-whileness of the American ideal pattern of intergroup relations. This is basically a problem in intercultural self-education for the citizenry and the educators. There are many ways in which the process of the educators educating themselves may be carried out. Among these are the use of consultant services, institutes, reading programs, discussions, attendance at workshops and at intercultural courses, and the development of an intercultural library.

2. The analysis of the intercultural needs of the pupils in terms both of the long range and short range problems of the concentric rings of communities beginning with the neighborhood and ending with the one world. These may include the making of an intercultural history of the community; the use of existing or the making of new surveys into the present intergroup status of the community, and the pushing of this research into broader areas; conferences; interviews; the calling of meetings of representatives of the several community groups; the making of sociogrammatic studies of the community; the wider study of history, sociology, economics. A good intercultural program will be tailored for community needs.

3. The development of a curriculum program to meet the intergroup needs of the community. Such development will necessitate a survey of general educational methods and a close scrutiny of the curriculum to determine areas rich in intercultural teaching opportunities. It will demand a re-evaluation of objectives, resources, and methods, the training of teachers, the development and dispersal to the several staffs of curriculum units.

4. The actual teaching of these intercultural units. This process involves the translation of the philosophy, objectives, curriculum resources into pupil activity. Again it is worth emphasizing that the test of the adequacy of the program is not the blueprinting nor setting up of its machinery, not the indoctrination of the operators, nor their skills in the abstract, but the product as evidenced in the efficient intergroup maturation of the pupils.

School Agencies for an Intergroup Program

We can perceive a wide range of agencies for the development of a program of intergroup understanding in a public school system. (1) The schools as public schools will be a potent influence for much intergroup understanding. They cannot be otherwise if they confer equal opportunity on all students regardless of race, creed, color, or economic circumstances. To the extent to which they do not offer this democracy of opportunity they are not truly public schools and they had better re-examine their philosophies and practices. (2) The several staffs must co-operate. Much intergroup education proceeds without precept through the practices of the educational leadership in the public schools. The example of all who stand in the teaching function must be in keeping with decent ideals of intercultural understanding in American democracy. (3) The social relations of the pupils in the classroom and in all other places in which the schools have a determining influence are important agencies. (4) Instruction in matters of intercultural relations is the most important means.

Instructional Approach to Intergroup Education

Two instructional approaches to intergroup education are possible, the direct and the incidental. The latter approach has three ad-

vantages: (1) It integrates intercultural relationships into many activities. This is the condition in which they exist in out-of-school life. (2) It provides much more time and opportunity for intergroup training than could be given in a segregated unit. (3) It avoids some of the dangers of bringing intercultural differences into sharp focus. For these reasons the incidental is generally to be preferred to the direct approach.

Areas of Intergroup Education

Another question is, "Where do we fit intergroup education into the existing curriculum patterns?"

Using the term curriculum in its widest sense and contemplating the full, incidental possibilities we should answer, "In some way, everywhere." To validate that answer let us examine certain key aspects of an intergroup program.

1. As means of teaching intergroup living as we have seen all areas of the curriculum offer excellent opportunities. The assignment of identical desks in the typical classroom is a case in point. Equal recognitions of merit regardless of race, creed, or color is another. Equal opportunity in the classroom is even more basic. The working together in teams is another. Of course not all American public schools do an equally effective job of seeing to it that whatever the deplorable condition outside, within the jurisdiction of the schools the letter and spirit of American credo are observed.

2. As a means of indicating the contributions of all groups and of individuals from the group to our great common social heritage all areas again offer rich possibilities.

3. As a means of correcting viewpoints based on partial or erroneous information or of providing the informational bases for the development of later correct viewpoints, the several areas of the curriculum exhibit a varying efficacy.

It is a little difficult to see, for instance, how very much can be done in this regard through the mathematical sciences or through the commercial subjects. The connection, too, between intergroup misinformation and the informations and skills involved in industrial arts is meager — although the alert industrial arts teacher may wish to use his shop opportunities to act casually as an adviser in vocational guidance, in which case he could deal with employment and shop practices touching on intergroup relations. Physical education, too, is lean in informational opportunities, but rich in other respects. So are the physical sciences — chemistry and physics.

More valuable informational bases can be found in the biological sciences. Here the unsupported fictions of racial superiority can be exposed with devasting evidence.

Foreign languages, ancient and modern, can be used to introduce pupils to other cultures so that they may begin to wonder if the typical judgment of other folkways as "wrong" or "crazy" may not be premature.

The richest area, of course, is to be discovered in the social science group. Here there scarcely is a subtopic without intergroup significance. To cite only a few scattered cases, consider the informational opportunities in history, of the Reconstruction period, or the nativist movement; or in geography, of the races we meet in our travels and the relation of man's progress to his environment; or in sociology, of stereotyping as a phenomenon in social psychology; or in economics, of the distribution of wealth in relation to color and condition.

Dr. Harry A. Burke
Superintendent-Elect
Omaha, Nebraska

Dr. Burke, who was formerly head of the schools of Great Falls, Mont., on June 1, was elected superintendent of schools at Omaha, Neb. He succeeds Dr. Hobart M. Corning who left Omaha in March.

Dr. Burke, 49, was principal of the Gothenburg, Neb., high school from 1921 to 1922, and superintendent there from 1922 to 1933. He was superintendent at Kearney from 1933 to 1942. He was active in the revision of the Nebraska teachers' certification law.

Because reading is a sort of educational Mother Hubbard, the reading program, especially at the elementary level, may deal with much material containing intercultural informations.

4. As a means of developing sensitization and motivation we must turn of course to those areas of the curriculum richest in imagination and emotion, to literature, art, and music.

5. To develop articulateness for the interculturally mature we go to oral and written composition. These in turn are not wholly sequestered into the periods assigned to them as composition and speed, but are to be found integrated into the other subject matter areas of the curriculum and rather widely into the cocurricular program.

In all five objectives listed above, however, let us not rashly suppose that the educational outcomes follow automatically under any and all circumstances. The approach, the lesson, the follow up determine the efficiency. *The Merchant of Venice* may be taught so as to kindle racial hatred — or may become a notable document making for intergroup living. And the same may be true of that much mooted infantile classic — *Little Black Sambo.*

Certain Precautions in Intergroup Education

In organizing a program of intercultural education certain reasonable precautions would seem to be indicated. For one thing we must be careful not to stir up trouble where there is none. Good intentions are not sufficient. It is conceivably possible that to speak to children of differences of race, color, religion may be to accentuate these differences rather than to diminish them.

Then we should make haste slowly. Many of the intergroup problems of yesterday have disappeared with time, as will many of the intercultural problems of today. In psychological as well as in physical illness there is a rate beyond which we cannot push healing without endangering the patient. The person with the crusading viewpoint is inclined to be impatient with the person with the teaching viewpoint. But teaching is basically a slow process. Meanwhile social inertia acts as a great conservative force in society.

Finally we should be conscious of the fact that in dealing with this problem schools are schools, and best serve by keeping within their reasonable functions.

A thoughtful American administrator recently summarized a whole philosophy of intergroup education into a single paragraph. Writing in *Teaching Progress,* Superintendent Lowell P. Goodrich of Milwaukee said: "The imperative need for the development of wholesome intercultural concepts and consistent practices in human relations has stimulated renewed interest at all educational levels. There may be some who are bewildered by the approach of a seemingly new subject to be added to a crowded curriculum. It is therefore important that we remind ourselves that the American public school is basically and by its very nature an intercultural environment dedicated to the realization of democratic opportunity. There is no more effective intercultural education than that which inheres in the process of teaching according to the ideals of free schools. It is more than accidental that prejudice has retreated as free public education has advanced. We are not confronted by a new undertaking but by an increased consciousness of an objective. Our problem is to avoid an emphasis which will increase the awareness of individuals as representatives of groups rather than as individuals, and to insure that we shall not miss the incidence of opportunities for practical experience with right human relationships."

RECREATION

If education builds for the assumption of responsibilities in adult life, consideration must be given to the recreational needs of children. Varied programs both in and out of school, under school sponsorship and in co-operation with other agencies, should be developed for children. Youth need to learn through profitable experiences how to make wise choices in the use of their leisure time. This is both a school and a community responsibility and should be solved jointly. — *School Life.*

New Light on School Lighting

R. L. Biesele, Jr.[1]

There is a growing consciousness that lighting and the visual surroundings are probably the dominant factors in the environment of the school child. These factors emerged early in the studies conducted by D. B. Harmon and his staff of the Texas State Department of Health and the Texas Interprofessional Commission on Child Development. These studies have covered more than 160,000 Texas school children.

These studies, for example, showed that in the Becker School, Austin, only 30.7 per cent of the children showed refractive eye problems in the low first grade, while 71.4 per cent showed them in the low fifth grade. During the first four school years, the number of visual cripples was being more than doubled.

Among the entire group of 160,000 elementary school children, 59 per cent had refractive eye problems, 39.5 per cent had eye problems other than refractive, 71 per cent had nutritional deficiencies, and there were similar high percentages of other difficulties. An increasing realization that a good number of these difficulties can be attributed either directly or indirectly to a faulty classroom environment has produced a wide interest in methods for producing a more helpful classroom environment.

Nearly 80 per cent of the activity in the elementary school is what is known as close-visual-centered activity, or activity which is carried on within arm's reach. The importance of light and vision in this activity has made both natural and artificial lighting an important part of the extensive school building and remodeling programs getting under way in all parts of the country.

But classroom lighting is a complex affair. The relationships of light, sight, and visual comfort are in themselves involved and obscure. Furthermore, the lighting and visual surroundings are only part of the child's environment. However, the studies conducted by D. B. Harmon,[1] the experimental work carried on at Mexia[2] which will be reported in the paper by Dr. Frank L. Williams in the next issue, studies of visual comfort carried on by various individuals, 3, 4, 5, 6 and further investigations being conducted in the Highland Park Independent School District, Dallas, Tex., are serving to consolidate the many factors involved, and permit the design of a classroom lighting system which will help, rather than hinder, the child in his growth, development, and learning.

[1]Associate Professor of Electrical Engineering, Southern Methodist University, Dallas 5, Tex.

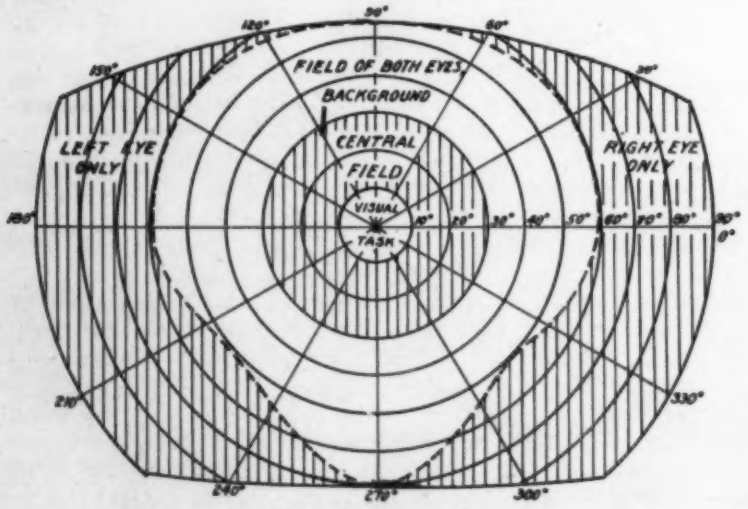


Fig. 1. The visual field.

Fig. 2 — General view of unchanged Room 206, University Park School, Highland Park Independent School District, Dallas, Texas, showing excessive brightness contrasts and glare from windows in conventional classroom.

The Child

In designing the lighting for a classroom in order to produce a helpful, rather than a harmful visual environment, it is necessary to look first at the child. There are several things which must be considered.

1. It is necessary to look at the child as a whole, at all that he is doing, and all the influences to which he is subject. It is impossible to divide him into parts. Any attempt to consider only one part or factor is apt to produce trouble in another.

2. The school child's first and primary function is to grow and develop. How well he grows, how efficient an adult he becomes, depends on all the factors, environment, food, clothes, accidents, vitamins, psychological factors, energy demands, lighting, and vision, which help or hinder his growth.

3. A child learns what he reproduces. He reproduces what he senses. If he senses wrongly, because he can't see well or sees in a distorted way, he learns incorrectly. Any educator is only too aware of the fact that it is many times as hard to unlearn and relearn correctly as it is to learn correctly the first time.

4. A child will always adjust automatically to reduce to a minimum all the stresses to which he is subjected. If that adjustment puts him regularly into a one-sided position, he will will grow one sided. It is quite simple to demonstrate that light can produce a severe shift in the position of a child, or of an adult. A person with a disturbing light source in his field of view will either shield his eyes with his hand, or shift his head until he can no longer see the light. Such shifts of the head, if excessive, produce distorted vision and eventually refractive eye defects.

5. The posture a child assumes is a composite effect of all the stresses to which he is being subjected at the time.

6. A child does not see just to be seeing; he sees in order to act.

The Functions of Light

Seeing, or recognition, is only one of the body processes set into action by light entering the eye. Light actually has five physiological functions.

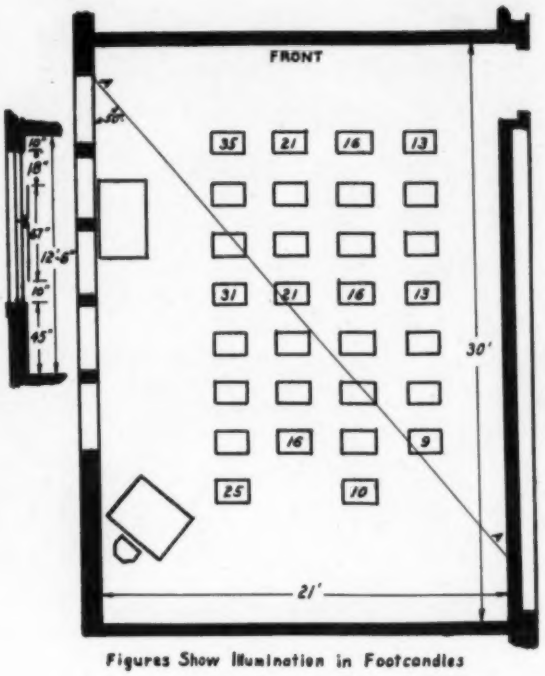
1. It prepares the mind and body to respond to any external stimulus. In this respect, it is similar to the switch on a radio set.

2. It helps an individual orient himself in space. It tells him where he is with respect to all the other things in his field of view.

3. It causes him to adjust his eyes, his head, and his body, almost automatically, to face anything which has caught his attention.

4. It permits him to see, or recognize, the object or visual task which has caught his attention. This is what is usually thought of as *seeing*, although actually all five functions of light mentioned here are various aspects of the seeing process.

5. It assists the body and mind in performance of the task called for by what is seen.



Figures Show Illumination in Footcandles

Fig. 3. Conventional arrangement of classroom.

Fig. 4 — Normal view, looking down toward desk, of child in left rear seat of Room 206. Figures show brightness values in foot-lamberts. Note veiling brightness on portions of paper due to reflection of window brightness off of dull paper. This effect would be much more serious with glossy paper.

Energy

A child has available for use only a certain amount of energy, which must be spread over a number of demands. The first demand on his energy is that required to keep himself alive, that required for his normal body processes such as breathing. The second demand, in point of priority, is that which goes to the performance of what he is called on to do by all the influences in his environment. If, after the first two demands have been met, there is any energy left, it goes to fighting infection. If there is still any energy remaining, it goes to growth.

Yet it must be remembered that about 80 per cent of the total energy required for most actions is used up in merely getting ready to act, and only 20 per cent in the actual performance. This is particularly true of the close-visual-centered tasks of school. Consequently it is possible for us to make large demands on the energy of school children, even though there may be no overt action at all.

Such excessive energy demands, which can easily be produced by a faulty visual environment, will decrease growth and development, the primary function of the school child. If even more excessive demands are made, and this, too, is possible with faulty lighting, we can easily produce a state of undernourishment and even of chronic infection.

Fig. 5 — Normal view, looking horizontally forward, of child in left rear seat of Room 206. Figures show brightness values. Note particularly the very high brightness of the window, which is within 25° of this child's line of vision. Over half the windows in the room are within 50° of this child's line of vision, with the conventional seating arrangement. Excessive light from the windows into the child's eyes causes body twists to avoid the glare, and makes excessive demands on the child's energy.

The Visual Field

In recent years we have learned much of the way the eye functions in responding to light coming toward it from the visual field. It is this light, coming into the eye, which enables us to see and to react to our environment. How bright the parts of the field are, and particularly how the brightnesses of the different parts compare, determines whether a given visual environment is harmful or helpful.

Figure 1 shows the visual field of the eyes. In the very center of the field of view, and extending not more than one degree out from the center in any direction, is the area of most precise vision. The eyes automatically bring any visual task into such adjustment that it can be examined in this part of the visual field when fine details are to be distinguished.

The second part of the visual field extends about ten degrees each way from the center of the field. This is the area occupied by the *visual task*, the area in which most of the work of recognition occurs. It covers about the same visual area as the backs of the hands, held together at arm's length, palm outward. To promote recognition of fine details in this area, it is desirable that the details be as large as possible, and that they have maximum possible contrast in brightness with their immediate background. The longer the time available for recognition, the more certain the recognition will be. And for efficient recognition of details, the average brightness of the visual task should apparently be at least 10 to 20 foot-lamberts, while higher brightnesses can somewhat compensate for extremely small visual size, or for poor contrast between details and background.

Translating these requirements into a specific classroom visual task, such as reading, it is desirable that the print in a book be large, that the book be printed with a very dark ink on a very white, but matte-surfaced paper, that there be time to read, and that there be a generous amount of light (at least 20–25 foot-candles) on the page. While a higher level of brightness would compensate somewhat for poor printing, it is much more feasible in schools to insist on the proper type of materials, than to try to compensate for poor materials with more light.

The balance of the visual field of both eyes can be considered as the background of the visual task. The most critical part of this background is the portion nearest the visual task, extending to about 30 degrees out in each direction from the center of the field. This area is known as the central field. For maximum visual comfort, freedom from distraction, and greatest visual efficiency, it is desirable that the average brightness of the visual task be slightly greater than, but not more than three times as great as the balance of the central field. With these brightness

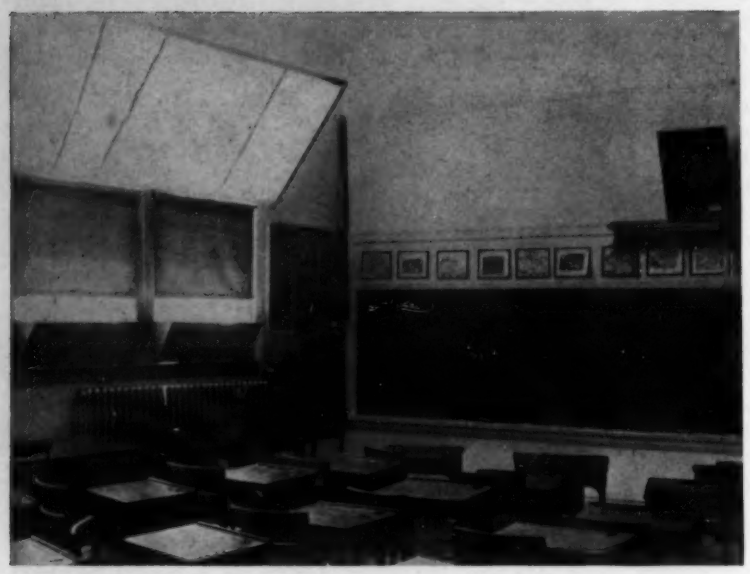
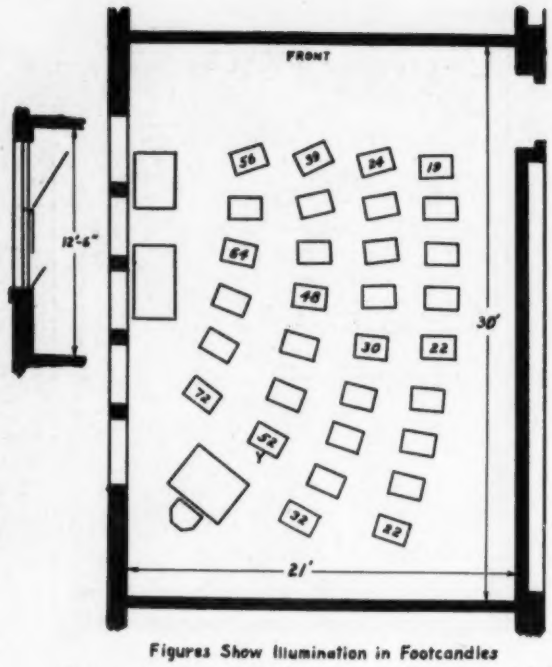


Fig. 6 — General view of changed Room 208, University Park School, showing decreased brightness contrasts and glare when light diffuser is installed at windows and room has been redecorated.



Figures Show Illumination in Footcandles

Fig. 7. Arrangement of classroom for betterment of lighting.

ratios, and provided the conditions for easy recognition of details of the visual task have been met, close visual work can be carried out for long periods without visual discomfort.

If the brightness ratio between task and background becomes as great as 10 to 1, or if the ratio is as much as 1 to 3, with the background brighter than the task, then visual discomfort may not be immediately noticeable, but will usually be noticed within an hour or two. Ratios of 50 to 1, task brighter than background, or 1 to 10, background brighter than task, are uncomfortable even on casual inspection, and are not tolerable for even short periods.

Translating these requirements into a classroom situation, one finds that the colors and reflection factors of the desk tops, the floors, and the walls of the room, together with any other objects or areas in the normal field of view, must be so chosen that the average brightness of the field of view will be slightly less than, but preferably not less than one third the average brightness of the book the child is reading.

The brightnesses of the background outside the Central Field are not so critical as those inside the Central Field. Under no circumstances, however, should a bright light source come within 50 degrees of the normal line of sight of the pupil when seated at his desk, either when looking down at his desk, or when looking straight forward and horizontal. Nor should there be any shiny surfaces in his field of view which, by reflection of some bright source, might act as a secondary light source within 50 degrees of his line of sight.

Nor should there be, ideally, any area of greater brightness than the child's visual task in his field of view. People are, like insects but to a lesser extent, phototropic. They tend to turn and face the brightest part of their field of view. Thus any area of brightness greater than the visual task acts as a distracting influence, and may cause the child to expend large amounts of energy simply in fighting the urge to turn toward this brighter area while doing his school tasks.

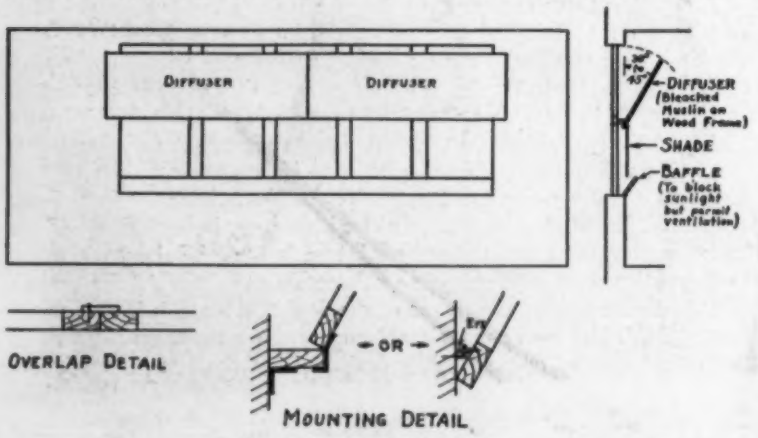


Fig. 8. Detail of light diffuser.

The Typical Classroom

With this as a background, it will be of benefit to see how well a typical classroom meets the requirements of the ideal visual environment. Figure 2 is a good example, as found in the University Park School, Highland Park Independent School District, Dallas, Tex. As classrooms go, this room is probably better than average.

The room is 21 feet wide, by 30 feet long, with a 12½-foot ceiling. Windows extend along about two thirds of the left wall, and are provided with double-hung shades, hung at the center of the windows. Seats are arranged in rows parallel to the window wall, and face straight forward, with the line of sight parallel to the window wall. Blackboards fill a good part of the front, inside, and back walls, but are somewhat lighter than the usual slate or imitation slate boards of 5 to 10 per cent reflection factor. The blackboards in this room are dark green, with a reflection factor of 15 per cent.

The decoration of the room is above average, so far as the use of light finishes is concerned. The ceiling and top two feet of the walls down to a picture molding were painted flat white during the past summer, and have now a reflection factor of 75 to 80 per cent. The rest of the walls are buff, with a reflection factor of approximately 60 per cent. The desk tops are in good condition, with a reflection factor of about 27 per cent. The floor has darkened with use, but has a reflection factor of 18 per cent. There is a tackboard strip above the chalkboard, which is a fairly dark brown of 20 per cent reflection factor. In many classrooms, finishes have either been poorly selected and were too dark to start with, or they have darkened with age and the accumulation of dust and soot, resulting in much lower reflection factors than those found in this particular school.

This classroom arrangement has several faults. On dull days, and on sunny days when the shades have to be drawn so that direct sunlight cannot enter the room, so much of the natural light is blocked that there is insufficient light for good vision on the desks toward the inside wall. This is indicated in Figure 3, which shows the illumination on the desks on a sunny day in April, with no artificial illumination in the room.

More serious, however, is the improper distribution of brightness in the field of view. The desk tops and floors are slightly too dark compared with the brightness of the work, as shown in Figure 4, which is taken in the direction the child would look toward work on his desk. This is not so serious as the fact that all the children to the left rear of the room, behind the line A-A, Figure 3, have the windows, which

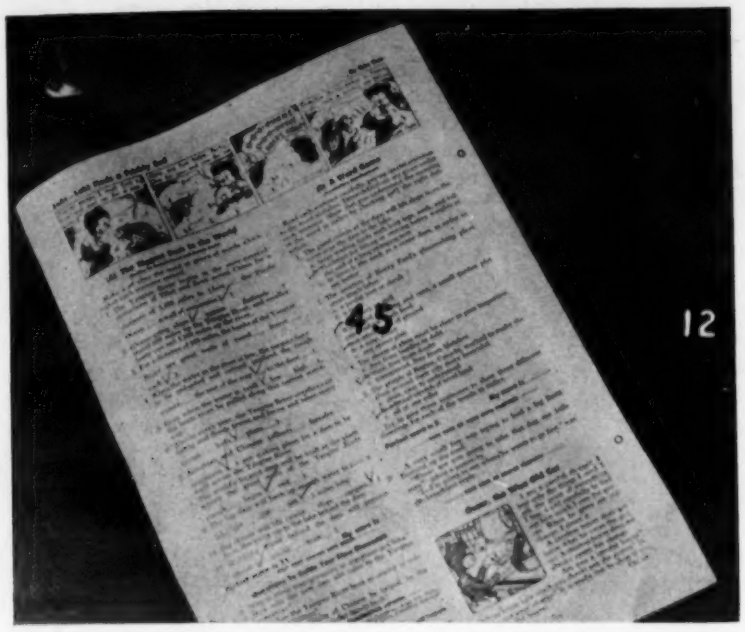


Fig. 9 — Normal view, looking toward desk, of child in seat "Y" in changed Room 208. Brightness ratio between visual task and desk is approximately the same as in Room 206, Fig. 4, but veiling brightness noted in unchanged room is almost absent in remodeled room.

act as a very bright source of light, within 50 degrees of their normal line of sight when they look horizontally forward. Figure 5 shows the field of view of the child seated in the left rearmost seat in the room, but does not, of course, cover as wide a field as the eyes of the pupil seated in this position. The excessive brightness from the window is what causes the child to duck or twist to avoid it. This is much more serious than the fact that almost all the background would be much brighter than the visual task if the task were reading from marks on the chalkboard.

While the brightness ratio of the visual task to darkest part of the background was 16 to 2, or only 8 to 1, which is fairly close to the ideal, the brightness ratio of task to the lightest part of the background was 16 to 2500, or worse than 1 to 150. This latter ratio is far beyond the desirable values indicated earlier, and while it is admittedly taken for the worst location in the room, some student has that worst seat in every classroom. It is of interest to note, also, that most of the visual, nutritional, postural, and other difficulties found by D. B. Harmon and his staff occurred in the left rear portions of the rooms, where the windows are within 50 degrees of the line of sight.

The Remodeled Classroom

The photograph, Figure 6, shows a remodeled room in the University Park School. It has the same dimensions as the room described in the preceding section, is on the same side of the building, and the photographs and readings were taken at very nearly the same time on the same day, which was clear, and on which the natural light showed virtually no variation.

Since the classrooms in this school, as in virtually all schools, depend for their illumination primarily on natural light, three major steps were taken to improve the visual environment in this room with natural lighting.

1. The desks in the room were reoriented to turn the children so that none had a window within 50 degrees of his normal line of sight. The angle was a compromise, between facing the child as far as possible from the window, and preventing shadows from his head or shoulder from falling on the work surface. This resulted in the arc arrangement shown in Figure 7, and improved the uniformity of the brightness pattern in the field of view. Particularly, it removed the windows from the central part of the visual field, and has largely eliminated the shifting and twisting necessary to avoid the glare formerly encountered.

2. The room was redecorated, to provide a more efficient utilization of light and a visual field with more uniform brightnesses. The ceiling, all walls down to the picture molding, and the window and rear walls were painted flat white, of 85 per cent reflection factor. The rest of the front and inside walls were painted ivory, of 70 per cent reflection factor. The chalkboards, except that in the front of the room, were converted to tackboards, and painted to match the wall. The floor was scrubbed clean, which, in this case, was all that was necessary to bring its reflection factor up almost to 30 per cent, a desirable value for floors. Further cleaning, or sanding, then sealing, are contemplated during the summer vacation period. Most desk tops were near 30 per cent reflection factor. Those with lower reflection factors are to be sanded and refinished during the summer to bring their reflection factors within the desirable 30 to 45 per cent range.

3. The windows were provided with a diffuser (see Fig. 8) of bleached muslin, stretched on a frame of 1 by 2-in. boards. Its purpose is to permit sunlight to enter the room, but to diffuse the light throughout the room, rather than permitting it to enter as a direct beam. The diffuser replaces the upper shades, which serve only to block out the light on sunny days. The lower shade is left in place, and is drawn down toward the top of an inclined light baffle, which permits ventilation at the bottom of the windows without entry of direct sunlight.

The diffuser can be omitted in rooms not subject to direct sunlight, but is of great help in those which are. Its chief disadvantage is that of maintenance, and further experimentation is being carried out to find a more suitable material. There is a very satisfactory glass block, so designed that it redirects entering light to the ceiling of the room, which was installed in one room at the Mexia, Tex., project. For new construction, it is a satisfactory solution for the problem, but the installation cost for existing structures will probably be found too high for most schools.

The remodeled rooms are much closer to the ideal visual environment, as indicated in Figures 7, 9, and 10. The average illumination in the room is 40 foot-candles on the desks, as compared to 18 in the unchanged room. The brightness ratio between visual task and darkest portion of the visual field is 45 to 5, or 9 to 1, for the desk in position "Y," which corresponds to the left rearmost position in the unchanged room. There is still room for improvement, which will be produced by a further lightening of the floor during the summer, by painting the door to match the wall, and by replacing the dark green chalkboard with a light chalkboard for use with dark chalk, if and when a suitable light chalkboard material is discovered. The brightness ratio of visual task to lightest portion of the field of view was 45 to 50, or 1 to 1 plus. It is probably the reduction of this ratio from 1 to 150 down to almost 1 to 1 which has produced the striking improvement in visual comfort in this room, as compared to the unchanged room.

(Concluded on page 69)

Fig. 10 — Normal view, looking forward, of child in seat "Y" in changed Room 208. Note absence of excessive brightness in field of view. Further improvement could be obtained by putting lighter finish on door, and by replacing green chalkboard with a light finish board for use with dark chalk, reducing still further the over-all brightness ratios.

A Useful Staff Position: The Administrative Assistant to the Superintendent

Henry H. Hill[1] *and Dan H. Cooper*[2]

Two years ago, the Pittsburgh school board established in its administrative staff the position of administrative assistant to the superintendent. Apparently this occurrence illustrates a development which has taken place in several city school systems in recent years. It appears that the position of administrative assistant to the superintendent is relatively new, or at least relatively unnoticed in educational circles. Until 1943, no such position was recognized in the salary tabulations of the N.E.A. Research Division,[3] nor can mention of it be found in periodical literature or in current textbooks on school administration.

The office is no oddity, however, even though it has received scant attention. In 1944–45, exactly 35 cities, out of the 293 cities with populations over 30,000 reporting to the N.E.A. Research Bureau, listed administrative assistants to the superintendent. The present variety of definitions for the position suggests that some discount should probably be applied to the N.E.A. figures to allow for errors in reporting. Nevertheless, a score or two of administrative assistants in city school systems are now at work.

Has Short-Lived Tasks

In view of the scarcity of published accounts about the administrative assistant, it may be that school administrators will be interested in one city's concept of the position. In Pittsburgh, the position is unique in that it is the only office in the schools which does not carry some particular and continuing responsibility. Other officers have a fairly permanent responsibility for elementary schools, or for reseach, or for some other definite aspect of the schools' work, but the administrative assistant is free for assignment wherever the pressure of work is heaviest.

The administrative assistant functions as a high-powered errand boy. The types of assignments depend (1) on the interests and abilities of the assistant, and (2) on the superintendent's problems and the confidence which he is willing to place in subordinates. No matter what the task may be, it is understood that the authority and responsibility of the assignment are for a relatively short term, lasting only until the specific job is completed or some new problem arises.

It is important to note the difference between the officer known as assistant superintendent, associate superintendent, or deputy superintendent, and the officer who is administrative assistant to the superintendent. The first officer has continuous responsibility for some major area of a school system, and ranks close to the superintendent in authority. The administrative assistant, on the other hand, is subject to special assignment on a moment's notice to any area, and his authority is a short-period grant, varying from one occasion to another.

An Outgrowth of Business

The position of administrative assistant is an outgrowth of the size and complexity of business corporations. Among large corporations the position of assistant to the president, and to subordinate executives also, has been fairly frequent for some decades and apparently is a successful practice. In a few cases, the office has become a career in business organizations, but usually it is a training post and the assistant is advanced after a relatively short period of service.

The literature and the practices of school administration contain many examples of procedures adapted from the business world. In some cases, borrowing has been done with less understanding of the difference in the purposes of private business and of public education than might be desired. Occasionally business practices have boomeranged to the discomfort of education, as for example when education has used unit costs too superficially and has found economy leagues able and willing to torpedo education with its own ammunition. Education has unique purposes, and it is responsible to a public that will not always accept business practices as the most important part of the school system.

The office of administrative assistant appears, however, to be a business device which may be transplanted successfully into city school systems. Even top-flight business executives, with all the power of private business to decide and to order, have found action delayed or bungled because of red tape or because there was insufficient time to review masses of assembled data. The delayed action is roughly comparable to the troubles of the railroad engineer with a long string of boxcars — his efforts to get the caboose to move may be stopped through the sheer inertia of too many freight cars. The example of big business in using staff assistants to solve this problem has apparently been followed by many an overworked superintendent or college president who has found himself losing effectiveness through his distance from first-hand observation or because of the wordiness or special interests of his staff. A busy executive needs a competent person with foot power (an absolute desideratum) who can do what the executive in theory should do if he were a superman. He needs also in this same person first-rate thinking ability and an abundance of tact. Unless he can find an assistant with these qualities, he had better do without. The assistant should have enough competency and personality to win respect and esteem wherever he goes, and he must be willing to see his best ideas used without generous or specific credit. His reward is a better chance to learn a school system — and the superintendent — and an almost sure promotion in the system or elsewhere.

The Human Element

It must be noted that this position may easily be a failure through the frailty of human beings. If the superintendent gives too much honor to the assistant or if the latter uses his "inside track" to promote friends or special interests, the situation speedily becomes "snafu." Mental elephantiasis on the part of the assistant will bring down the just wrath of the regular line officers. The writer recalls the "boiling pressure" of a university dean seated among the common folk at a banquet while the assistant to the president sat in Jovian grandeur at the speaker's table!

Where the position is a new one there will probably be much speculation on what the assistant is to do. So long as he isn't regarded as an emissary to trap the unwary, no particular harm is done by this inquisitiveness. Everyone rather enjoys a mystery of this kind, and it isn't altogether fair to resolve it too specifically or too soon when all are enjoying a new subject for the gossip sessions. If the assistant is pleasing enough he will be accepted as he becomes known.

The exact duties of the administrative assistant in Pittsburgh during the past two years have ranged from the significant to the routine, from 15-minute jobs to a project which may well continue for the next five years. Some projects have been assigned in almost every area of the school system, with slight emphasis on relationships between the instructional department and other departments of the school system, and on relationships between the schools as a whole and the social and governmental agencies of the community. The assistant serves not only the superintendent of schools, but also the associate superintendents in charge of elementary and secondary schools.

The Assistant in Pittsburgh

In Pittsburgh the office is a partial solution to a problem which plagues so many school systems. At present, the superintendent's office is markedly understaffed. Since 1930 the department of the superintendent of school's

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[1]President, George Peabody College for Teachers, Nashville, Tenn., and former Superintendent of Schools, Pittsburgh, Pa.

[2]Administrative Assistant to the Superintendent of Schools, Pittsburgh.

[3]*Special Salary Tabulations: Salaries Paid School Administrative and Supervisory Officers.* Research Division, National Education Association of the United States, Washington, D. C. Published biennially.

office has reduced its salary expenditure 26 per cent, while pupil enrollment has decreased only 20 per cent and total expenditure for schools has decreased 8 per cent. Consequently, the administrators in the instructional division are carrying loads formerly divided among several more people. It has not seemed advisable to meet this situation by appointing additional line officers, for many of the tasks do not require the full time of one person. For example, certain educational planning is needed in connection with school buildings, but not enough to constitute a permanent, full-time responsibility. Similarly, someone has been needed to organize day-care nursery centers, to study clerical work loads, to work with social agencies, to follow state school legislation, and to make special statistical studies. The administrative assistant, free to shift from one task to another, has been given a full load out of this collection of short-term duties.

Nor does it appear that there is any end to the addition of further unrelated duties. Apparently there is a perpetual supply of miscellaneous administrative work to be done in school systems if someone can be found to do it. It would appear that the administrative assistant might be particularly useful in medium-sized cities, where many tasks are not quite big enough to warrant a full-time officer, but where the accumulation of part-time tasks is altogether oppressive for the existing administrative staff.

An advantage of the position is the training and testing it affords the incumbent. As a training ground for potential administrative personnel, it would seem to be without equal, for the assistant's work acquaints him with every part of the school system and requires every administrative ability. Inevitably, the assistant's peculiar interests and abilities are revealed as he proceeds. Consequently, his future placement in the school system can be wisely determined. Furthermore, the office lends itself quite well to short terms of tenure and rapid turnover. Hence, a succession of potential administrators can be moved through the office in preparation for other positions without difficulty.

Whether or not administrative assistants to superintendents become an accepted and universal part of city school administrative organizations will undoubtedly depend on the service those now in office render. Theoretically, the position promises much as means of lessening administrative burdens without scattering responsibility and as a testing and training ground for potential top administrators. Limited experience with the position in Pittsburgh indicates that it is a useful part of the administrative structure.

The Harvard Study of General Education[1]

John P. Treacy, Ph.D.[2]

The Harvard Committee's *General Education in a Free Society*[1] has been discussed in so many publications that its general nature is now fairly well known. In brief, President Conant appointed a committee of 12 prominent faculty members, relieved them of classwork for nearly three years, and gave them some $60,000 with which to work. The entire membership agreed on the essentials of the final statement, although many different fields of learning and interests were represented.

Chapter I gives a picture of recent social and educational changes, and shows the resulting educational problems of attaining unity while still recognizing individual needs. The second chapter outlines certain educational issues, and proposes some educational goals. The third chapter centers about the problem, "How can general education be so adapted to different ages and, above all, differing abilities and outlooks, that it can appeal deeply to each, yet remain in goal and essential teaching the same for all?" (p. 93.) Chapter IV recommends in a general way the requisites and content of a secondary school curriculum. Chapter V discusses general education at Harvard. The sixth and last chapter discusses the community aspects of education.

A possible justification of further articles on this report is the fact that each educational group sees it from a slightly different angle. The social science teacher magnifies its social aspects; the science teacher, the science aspects; and so on for other fields of educational interests. It is even possible that the interpretations of this potentially controversial work will savor of the "Six Blind Men and the Elephant," because of highly specialized and, in some instances, deeply vested interests.

What in this Report is of special significance to the school board member? To the superintendent? To the principal? The reviewer believes that the answer is twofold: (1) the Report stimulates comprehensive thinking on educational issues and problems; and (2) offers carefully thought-out solutions to at least some of these issues and problems.

Those associated with the administrative aspects of schools are likely to be confronted with immediate problems so pressing that the issues and principles behind their decisions are obscure. Expediency rather than a long range view of education may be the controlling factor. The Harvard Report, representing as it does the fruits of long deliberations by capable individuals in varied fields, should be a force toward deeper, broader, and better integrated thinking on educational problems. Administrators may not agree with the solutions suggested. But their thinking should be enriched through seeing in this Report issues upon which to disagree. Few, if any, books on education represent composite thinking from so many intellectual areas — science, administration, education, humanities, religion, etc., as are found in this statement.

The Issues Discussed

The purpose of this review is not to exhaust the issues, problems, or solutions discussed by the Committee. Rather, enough will be illustrated to indicate the perennial and fundamental nature of the content, and to give some idea of what leaders in a reputedly conservative collegiate institution regard as desirable educational practice.

What is a good man? "By a good man is meant one who possesses an inner integration, poise, and firmness, which in the long run come from an adequate philosophy of life" (p. 74). "The complete man must be a good man. Moral character comes from the molding of the native powers to ideal aims. The final secular good is the dedication of the self to an ideal higher than the self — the devotion to truth and one's neighbor" (p. 169).

For whom is education? "The hope of the American school system, indeed of our society, is precisely that it can pursue two goals simultaneously: give scope to ability and raise the average. Nor are these two goals so far apart if human beings are capable of common sympathies" (p. 35).

Is present education a unifying force or a disintegrating force in American life? The Committee believes that in so far as there is extreme diversity of educational offerings for different levels of students, education is a disintegrating social influence.

What are the respective functions of special and general education? "Taken as a whole, education seeks to do two things: help young persons fulfill the unique, particular functions in life which it is in them to fulfill, and fit them so far as it can for those common spheres which, as citizens and heirs of a joint culture, they will share with others" (p. 41). Obviously, the former has to do with special education, the latter with general education. These two aspects of education are interdependent. Both are necessary in a democracy.

What distinguishes general education from special education? "A general education is distinguished from special education not by subject matter, but in terms of method and outlook, no matter what the field" (p. 56).

Is general education the concern of the college alone? The Committee thinks not. It is significant that although the Committee represented the collegiate level, considerable attention is given to elementary education, and the longest chapter in the book is given over to secondary education.

Is education only a matter of acquiring

[1] *General Education in a Free Society*. Report of the Harvard Committee, with an introduction by James Bryant Conant. Cloth, 267 pp. Harvard University Press, Cambridge, Mass.

[2] Professor of Education, Marquette University, Milwaukee, Wis.

knowledge? Rather, education is "the cultivation of certain aptitudes and attitudes in the mind of the young" (p. 64). The abilities to be developed are: to think effectively, to communicate thought, to make relevant judgments, and to discriminate among values. Too, education includes the development of purposes, based upon guided passions.

Should general education be the same for all? "The problem is one of combining fixity of aim with diversity of application" (p. 57). We should adapt general education to the needs of different groups, and carry its spirit into special education.

Unifying Forces Needed

What should be the unifying force in American education? "A supreme need of American education is for a unifying purpose and idea" (p. 43). Possibilities discussed are religion; traditions which are found in certain great books; concentration on problems students will meet in mature life, such as health and vocation; and science, as advocated by modern pragmatists. The Committee rejects each of these as a perfect solution. They believe that "the search must continue for some over-all logic, for some strong, not easily broken frame within which both college and school may fulfill their at once diversifying and uniting task" (p. 40). The Committee indicates that the study of American culture, particularly certain traits of man and ways of looking at man and the world, is a fruitful area for this search. This culture should be shared by all, not by the privileged few.

Should practical subjects and school activities hold a place of respectability, along with the more literate and bookish subjects? The Committee answers in the affirmative. They maintain, that every aspect of the present school offering has its place and may be a force for unity if properly handled.

Does the present secondary curriculum meet the needs of diversity and unity? The Committee thinks not. It maintains that more diverse offerings are needed for the extensive range of ability and interest found in the schools; and there should be more subjects which "unite man and man in their common humanity and citizenship."

What should be the framework of the secondary school curriculum? A long chapter is given over to the answer to this question. Some of the content is of interest only to the specialists in the respective areas proposed. The general fields discussed and proposed are: The *humanities* (English, foreign languages, arts); the *social studies;* and science and mathematics. In a section called "Education and the Human Being" the importance of the passions, the emotions, and mental health is discussed, as well as media other than formal classwork.

What is the place of religion in education? The committee recognizes its strategic importance, but doubts the possibility of teaching it in the American situation. "Education is not complete without moral guidance; and moral wisdom may be obtained from our religious inheritance" (p. 174). "We are not at all unmindful of the importance of religious belief in the completely good life. But, given the American scene with its varieties of faith and even unfaith, we did not feel justified in proposing religious instruction as a part of the curriculum. . . . We must perforce speak in purely humanistic terms, confining ourselves to the obligations of man to himself and to society" (p. 76).

What portion of secondary education should be general? The answer given is at least one half, or eight credits: three credits in English, three in science and mathematics, and two in social studies are suggested. This is suggested as a "barest minimum."

Intelligence and Opportunity

What causes differences in intelligence? "One approaches here a realm of causation doubly shaped by physical accident and the visible hand of the social order. The result is that what passes for intelligence is certainly in part the same thing as opportunity, by which is meant the whole complex of surroundings which help to shape a child's view of the world and of his place in it" (p. 10).

Should the school supply for the student what the community does not provide? The Committee believes that educators should be ever sensitive to the deficiencies and obstacles in the environment, and should strive to act in a residual capacity in effecting the optimum development of the students.

Is a great teacher sufficient without planned subject matter? The Committee does not think so. Gifted teachers have their place; but so has usable truth.

Are present teachers qualified to sense the deeper unifying values of education, and to attain these values through their teaching? The Committee is skeptical. They believe that the compensations of teaching are now so meager that the profession will have difficulty in attracting and training teachers who can achieve through their teachings the goals of general education.

These then represent *some* of the issues, problems, and solutions discussed in the Harvard Report. The brevity with which they are introduced here is hardly fair to the richness which characterizes the discussions in the book itself. Perhaps many school leaders will be sufficiently impressed by the importance of the topics reported here to read the Report in its original complete and scholarly form. Most individuals will have to do some re-reading to do justice to the content. This should not be considered a reflection on one when he considers the research, the discussions, and the syntheses which went into the book. The Committee indicates in the letter of transmittal that participating in the Report resulted in considerable self-education by members of the Committee. This is easily understandable.

The present writer sees in this work certain limitations, in spite of the rather optimistic tone exemplified thus far. He is disappointed at the expedient way in which religion is dismissed as a unifying force in American life, particularly in the light of the religious purpose behind Harvard's founding. He senses a certain democratic attitude toward secondary students of limited abstract intelligence; but, somehow, he doubts that many of the Committee members really have struggled with the practical problem of trying to teach the less academic of these individuals a curriculum such as is recommended. He believes that relatively there is too much importance given to subject matter, and too little to the problem of meeting individual student needs. He believes that the emphasis given to current social and economic problems is inadequate. He is disappointed that more practical suggestions are not found for implementing the recommendations made. And he wishes that the book had more mechanical aids, such as paragraph headings, indexes, and graphs to help the reader in studying and re-studying it. These criticisms detract little from the potential values mentioned earlier, for stimulating comprehensive thought on fundamental educational issues and problems, and for suggesting solutions to at least some of these.

THE TEACHER'S JOB IN USING TEACHING FILMS

The teacher's method of using teaching films is an important element in the success of this audio-visual aid. A writer in the Tulsa, Okla., *School Review* (March, 1946) suggests:

Regardless of the merits of the film as an instructional aid, the essential factor in its effectiveness is its utilization by the instructor. It is true there is no one best method of using any film, much less a single method to be employed in all film utilization. The film method will depend upon the specific objectives which the teacher has set up — upon what he intends the films shall accomplish. There are, however, some fundamental considerations for use of the instructional film, which are basically the application of good instructional techniques employed with any medium of instruction. A careful planning which takes into consideration preparation, presentation, and follow-up are as essential to the film lesson as in the case of any instructional medium.

With a definite purpose in showing the film, the teacher must be thoroughly familiar with the film to be shown to the class. The manuals are an invaluable aid in acquainting the teacher with the film content and in assisting in organizing and integrating the material.

Preparing the class for viewing a film must include creating a desirable attitude toward film use and a recognition of their responsibility for learning from the film. Certainly no film should be shown before purposes for seeing the film are well established in the mind of every student.

The desirability of reshowing the film one or more times should be considered. Most films are so rich in content that what is necessary for a specific purpose can rarely be grasped at a single showing.

The better the mechanical details are handled the more effective will be the presentation. Frequently such matters as poor seating, poor room ventilation, or inexpert projection technique mar the effectiveness of the learning situation.

The film lesson should not end with a passive "looking at" a film. The laws of learning which emphasize the need of active pupil participation are applicable to film use. This activity may include many forms of expression and should provide discussion of the points to look for as brought out in the student's preparation for viewing the film. A clarification of misunderstandings and a summarization are other essentials of the follow-up. It is this important step of placing the film in a dynamic learning situation.

The School Purchasing Methods Used in Cleveland

E. F. Smircina[1]

Mr. E. F. Smircina

The Cleveland board of education operates 154 schools in approximately 300 separate buildings. The daily average attendance is about 106,000 pupils, and there are approximately 3300 teachers.

By authority of the state of Ohio, three separate departments are maintained for the operation and administration of the Cleveland school system, each department headed by an official appointed by the board of education. The clerk-treasurer is in charge of finance and accounts, and also acts as clerk of the board; the superintendent of schools has full charge of the department of education; and the business manager is in charge of the business department. The board of education is composed of seven members, elected for 4-year terms by the voters of the Cleveland City School District. The administration offices of the Cleveland board of education are located in a splendid building in the Civic Center in the downtown of Cleveland, at 1380 East 6th Street.

The business department purchases all supplies, books, equipment, and services required for the educational department, for the schools, or for the operation and maintenance of the schools. All of these purchases are made under the direction of the purchasing agent. Three buyers, each assigned to the purchasing of certain categories of items, are under the supervision of the purchasing agent. While each buyer handles the purchases in an assigned category, he has been trained in the procurement *of all* categories, and is available when necessary to shift to other general classifications. In addition, the following personnel is required to take care of the necessary detail work in purchasing supplies and equipment: two typists, who type the proposals and purchase orders; a follow-up clerk; an invoice clerk, who checks the purchase orders, invoices, and receiving reports before passing the invoices to the clerk-treasurer for payment; and a price record clerk, who enters the prices paid for each commodity on a commodity price card for reference purposes.

Purchases are made upon the receipt of requisitions from a school or division, if and when the requisition has been approved by the appropriate department. All orders and contracts, of whatever nature, are issued to vendors only after they have been certified by the clerk-treasurer to the effect that funds are available for payment of the materials or services called for in the order or contract, in the particular budget account of the school or department issuing the requisition.

At the beginning of the fiscal year, budget accounts are set up for each school and each department, and all expenditures are charged against the budget account of each school or department, as they are certified by the clerk-treasurer's office.

Warehouse, Laboratory, and Shops

The Business Department, in order to serve the schools economically, efficiently, and promptly, operates a warehouse with a garage, a chemical laboratory, a toolroom, a sheet-metal shop, and a cabinet and paint shop for repairing and refinishing school furniture.

The warehouse consists of a four-story, fire-proof brick structure, and two detached one-story brick buildings, which are situated on a site with an area of 2.06 acres. For economical trucking these buildings are located in almost the exact geographical center of the school district. The buildings have a total of 82,000 square feet of floor space.

Approximately 1500 items, standardized for use in the Cleveland schools, are stocked in the warehouse, with a perpetual inventory of all items maintained. Delivery of these items on approved requisitions is made by trucks owned and operated by the board of education.

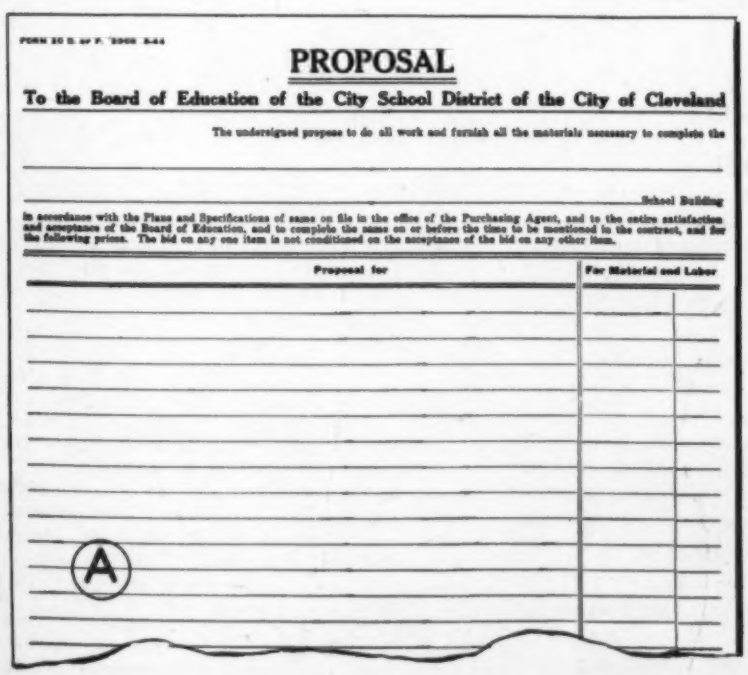
Mechanics in various building and service trades are employed by the business department to maintain all buildings and equipment in a safe and efficient condition.

Legal Regulations

Competitive bids are always solicited in the procurement of various supplies, equipment, and services. There are two classes of competitive bids, as follows:

1. The law of the state of Ohio prescribes a definite procedure which must be followed in every instance where the board decides to

[1]Purchasing Agent, Cleveland Board of Education, Cleveland, Ohio.



FORM 32 B. of P. 12000 5-44

PROPOSAL

To the Board of Education of the City School District of the City of Cleveland

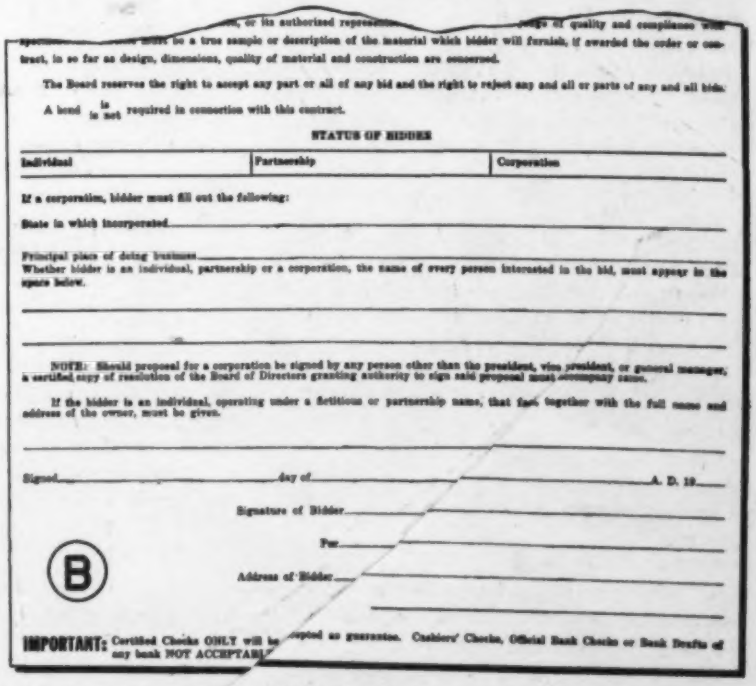
The undersigned proposes to do all work and furnish all the materials necessary to complete the

_____ School Building

in accordance with the Plans and Specifications of same on file in the office of the Purchasing Agent, and to the entire satisfaction and acceptance of the Board of Education, and to complete the same on or before the time to be mentioned in the contract, and for the following prices. The bid on any one item is not conditioned on the acceptance of the bid on any other item.

Proposal for	For Material and Labor	

A



...or its authorized representa... ...ample or description of the material which bidder will furnish, if awarded the order or contract, in so far as design, dimensions, quality of material and construction are concerned.

The Board reserves the right to accept any part or all of any bid and the right to reject any and all or parts of any and all bids.

A bond is / is not required in connection with this contract.

STATUS OF BIDDER

Individual	Partnership	Corporation

If a corporation, bidder must fill out the following:

State in which incorporated _____

Principal place of doing business _____

Whether bidder is an individual, partnership or a corporation, the name of every person interested in the bid, must appear in the space below.

NOTE: Should proposal for a corporation be signed by any person other than the president, vice president, or general manager, a certified copy of resolution of the Board of Directors granting authority to sign said proposal must accompany same.

If the bidder is an individual, operating under a fictitious or partnership name, that fact together with the full name and address of the owner, must be given.

Signed _____ day of _____ A. D. 19____

Signature of Bidder _____

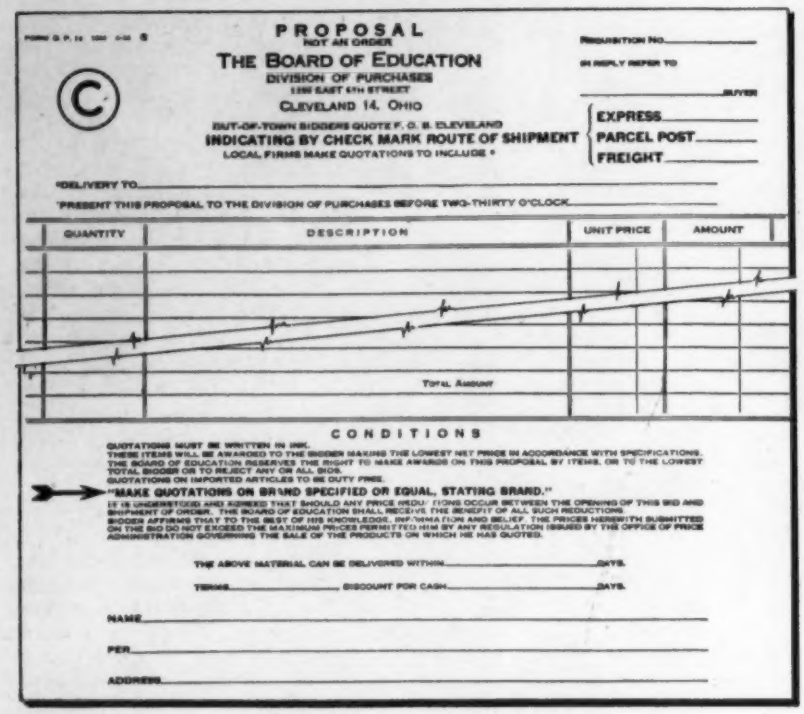
For _____

Address of Bidder _____

B

IMPORTANT: Certified Checks ONLY will be ...epted as guarantee. Cashiers' Checks, Official Bank Checks or Bank Drafts of any bank NOT ACCEPTABLE

Exhibit A. Formal Bid Blank. Exhibit B. Reverse of Formal Bid Blank.



PROPOSAL
NOT AN ORDER

THE BOARD OF EDUCATION
DIVISION OF PURCHASES
1380 EAST 6TH STREET
CLEVELAND 14, OHIO

Requisition No.
In reply refer to
Buyer

OUT-OF-TOWN BIDDERS QUOTE F. O. B. CLEVELAND
INDICATING BY CHECK MARK ROUTE OF SHIPMENT
LOCAL FIRMS MAKE QUOTATIONS TO INCLUDE *

EXPRESS
PARCEL POST
FREIGHT

*DELIVERY TO
*PRESENT THIS PROPOSAL TO THE DIVISION OF PURCHASES BEFORE TWO-THIRTY O'CLOCK

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
	Total Amount		

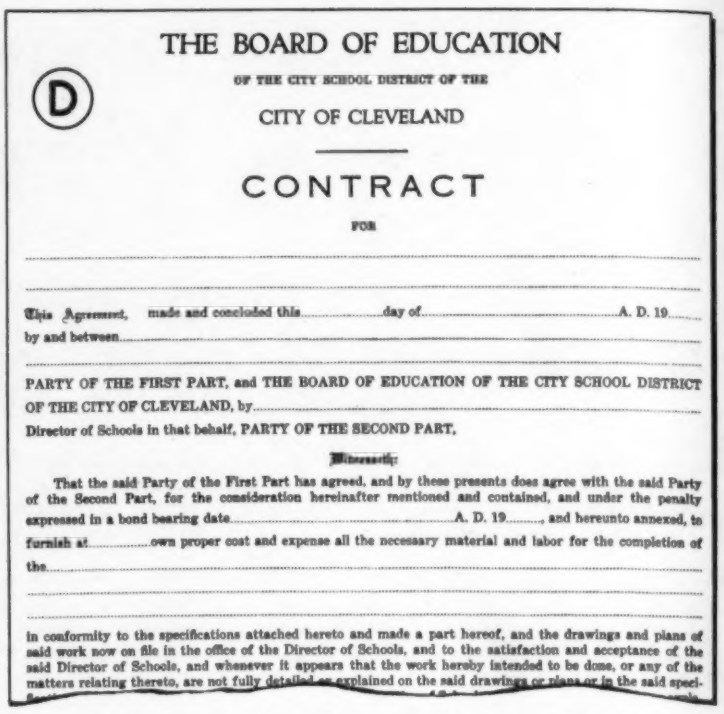
CONDITIONS

QUOTATIONS MUST BE WRITTEN IN INK.
THESE ITEMS WILL BE AWARDED TO THE BIDDER MAKING THE LOWEST NET PRICE IN ACCORDANCE WITH SPECIFICATIONS.
THE BOARD OF EDUCATION RESERVES THE RIGHT TO MAKE AWARDS ON THIS PROPOSAL BY ITEMS, OR TO THE LOWEST TOTAL BIDDER OR TO REJECT ANY OR ALL BIDS.
QUOTATIONS ON IMPORTED ARTICLES TO BE DUTY FREE.
"MAKE QUOTATIONS ON BRAND SPECIFIED OR EQUAL, STATING BRAND."
IT IS UNDERSTOOD AND AGREED THAT SHOULD ANY PRICE REDUCTIONS OCCUR BETWEEN THE OPENING OF THIS BID AND SHIPMENT OF ORDER, THE BOARD OF EDUCATION SHALL RECEIVE THE BENEFIT OF ALL SUCH REDUCTIONS.
BIDDER AFFIRMS THAT TO THE BEST OF HIS KNOWLEDGE, INFORMATION AND BELIEF, THE PRICES HEREWITH SUBMITTED ON THIS BID DO NOT EXCEED THE MAXIMUM PRICES PERMITTED HIM BY ANY REGULATION ISSUED BY THE OFFICE OF PRICE ADMINISTRATION GOVERNING THE SALE OF THE PRODUCTS ON WHICH HE HAS QUOTED.

THE ABOVE MATERIAL CAN BE DELIVERED WITHIN _____ DAYS.
TERMS _____ DISCOUNT FOR CASH _____ DAYS.

NAME
PER
ADDRESS

Exhibit C. Proposal Blank.



THE BOARD OF EDUCATION
OF THE CITY SCHOOL DISTRICT OF THE
CITY OF CLEVELAND

CONTRACT
FOR

This Agreement, made and concluded this _____ day of _____ A. D. 19____
by and between _____

PARTY OF THE FIRST PART, and THE BOARD OF EDUCATION OF THE CITY SCHOOL DISTRICT OF THE CITY OF CLEVELAND, by _____
Director of Schools in that behalf, PARTY OF THE SECOND PART,

Witnesseth:

That the said Party of the First Part has agreed, and by these presents does agree with the said Party of the Second Part, for the consideration hereinafter mentioned and contained, and under the penalty expressed in a bond bearing date _____ A. D. 19____, and hereunto annexed, to furnish at _____ own proper cost and expense all the necessary material and labor for the completion of the _____

in conformity to the specifications attached hereto and made a part hereof, and the drawings and plans of said work now on file in the office of the Director of Schools, and to the satisfaction and acceptance of the said Director of Schools, and whenever it appears that the work hereby intended to be done, or any of the matters relating thereto, are not fully detailed or explained on the said drawings or plans or in the said speci-

Exhibit D. Portion of Standard Contract Form.

build, repair, or equip a building, if the amount of the expenditure exceeds $3,000. In such cases the requirements are:

a) Bids for the requirement must be advertised in two daily newspapers of large circulation once a week for four consecutive weeks.

b) A deposit must be made, with each bid submitted, of a certified check, or "bidding bond" in an amount not less than 5 per cent of the bid.

c) Public opening and reading of the bids must take place at the time and place stated in the advertisement.

d) A "performance bond" for 100 per cent of the amount of the contract from the successful bidder is required.

e) The contract must be awarded to the lowest responsible bidder.

2. No set procedure is cited by the law for purchasing items not specifically enumerated in the Ohio State School Code, but the board of education has adopted the policy of soliciting competitive bids in all purchases.

Requests for all bids of both classes are posted on the bulletin boards in the corridor of the Business Department, near the Purchasing Division, in addition to the proposal blanks mailed to prospective bidders.

Where one or another class of purchases amounts to a considerable sum over a period of a year, and where a contract for this type of purchase is practicable for a year ahead, requests for such proposals are also advertised in the newspapers, although the Ohio state code does not prescribe it. Such purchases embrace items like coal and fuel oil; and milk, bread, and ice cream for school cafeterias.

Proposals or Bids

In soliciting bids, the purchasing agent furnishes to prospective bidders a proposal blank on which the requirements are typed. In all cases bids, in order to receive consideration, must be tendered on the board of education's proposal blanks. Two types of proposal blanks are used, designated as "Formal" and "Informal."

Formal Proposals (Exhibits A and B)

This type of blank is used when bids are requested after legal advertisements have appeared in the newspapers, whether or not the law prescribes advertisements. Exhibit "A" is a pink blank, used for bids on construction or repair work; while Exhibit "B" is a white blank, used for bids on equipment. The different colors make these blanks easily distinguishable by those who handle them.

The bidder, in submitting his quotation for the requirements set forth on the proposal blank, quotes a lot price for material and labor, in case of construction and repair work; and a unit price and total, in case of a bid on equipment.

The contents on the reverse side of both of these blanks are identical, consisting of instructions to the bidder as to the procedure he must follow in order to have his bid considered by the board.

Informal Proposals

In purchasing those items for which the state law prescribes no procedure, an informal proposal blank (Exhibit C) is used. This blank is one of a six-part fanfold form typed on a billing machine. This form provides for the insertion of the requisition number, the name of the buyer who is handling the bids, the method of shipment proposed and the price and amount on each item. (All shipments must be f.o.b. Cleveland.)

At the bottom of the form are printed conditions which must be followed by the bidder. One point on which the board is quite firm is that quotations must be made on the *brand or quality specified* in the proposal, and if the brand or quality bid is different from that *specified* in the proposal, it must be so *stated* in the bid.

A definite time, or date, is stated in the proposal, when the bids must be submitted for consideration, and an envelope is furnished each bidder for his convenience in submitting an offer. This envelope is in blue to assist the mailing department in dispatching the bids promptly to the purchasing agent. The proposal blanks and the proposal envelope both bear the *same number* as the requisition issued for the requirement. The sealed proposals, when received, are time-stamped and then held in a locked cabinet until the day and hour stated for their opening. Bids received after the time stated are returned to the bidder unopened.

Although sealed competitive proposals are, as a rule, requested, in the case of emergency items or in case of items costing a very small amount of money, telephone bids are requested. When such telephone bids are requested, confirmation of the bids is required of the vendors making the bids.

Contracts and Purchase Orders

In the case of formal proposals and the resulting bids, contracts are entered into and these can be authorized only by the board of education. The agreements are printed on a standard contract form (Exhibit D). This is a legal document, which sets forth the obligations of the contractor to complete the work in an approved manner in the period agreed upon, with penalty clause for delay. It protects the board with a 100 per cent performance bond from failure on the part of the contractor to live up to the terms of his agreement; it also provides for monthly payments to the contractor while the work is progressing, after inspection and approval by the authorized representative of the board, on the work completed up to date at that time.

The performance bond (Exhibit E) is a surety bond which must be supplied by the contractor for an amount equal to 100 per cent of the amount involved in the contract. This surety bond must also be approved by the board.

The contractor files an application for payment on contract (Exhibit F) if he desires to

Exhibit E. The Standard Bond Form.

(E)

BOND

Know All Men by these Presents, That we .....

.....as principals, and.....

.....

as surety, are hereby held and firmly bound unto the Board of Education of the City School District of the City of Cleveland, in the sum of.....

Dollars ($.....), for the payment of which well and truly to be made, we do hereby jointly and severally bind ourselves, our heirs, successors, administrators, executors and assigns by these presents.

The Conditions of this Obligation are such that, whereas, the above named principal did on the..... day of.....A. D. 19..... enter into the contract hereto attached, with the said The Board of Education of the City School District of the City of Cleveland, which said contract is made a part of this bond the same as if fully set forth herein.

Now, if the said party of the first part in the aforesaid contract shall well and truly execute all and singular the stipulations by it to be executed and shall fully and faithfully perform the work therein conditions and requirements of the plans, speci- less the Board of Education of the City School tions of every name and description brought District of the City of Cleveland, its officers person or property arising from or growing ed to be done, or the doing of any of the work he Board of Education of the City School Dis- expense over and above the expense included in nts that may be involved in the construction of any of the parts thereof, or in the use of said ereof hereafter, and if said party of the first and all suits and actions of every kind whatso- ication of the City School District of the City or any of the parts thereof, and further shall on of the City School District of the City of costs and damages of every kind and nature ntractors, materialmen and laborers for labor rd, performing or completing of said contract, ain in full force and virtue in law; we hereby for the benefit of any laborer or materialman he Board of Education of the City School Dis- rties to the foregoing contract may from time , omissions from, or modifications of the work, es and agrees that no modifications, omissions to the plans or specifications therefor shall in it is expressly understood and agreed that the shall in no event exceed the amount of this

..... A. D. 19.....

PRINCIPAL

.....

.....

SURETY

.....

.....

.....

.....

APPLICATION FOR PAYMENT ON CONTRACT Nº 899

(F)

Date.....

Payment in the amount of $..... is requested for work done during period from..... to.....in accordance with contract number.....covering the following work:

.....

.....

.....

At (school).....

.....

Contractor's Name

By.....

Street City

FOLLOWING SPACES FOR BOARD OF EDUCATION USE ONLY

I hereby certify that all work covered by this estimate was completed.....; is formally accepted.....and that said work has been carefully checked and found to be strictly in accordance with all drawings and specifications, and that this contractor has completed.....% of the contract.

Inspector.

Work accepted and Approved.....193....

Director of Schools

Original amount of contract			Local Account		
Debit Subsidiaries					
Credit Subsidiaries			Fund		
Net Total Amount			Account		
Amount previous certifications			Resolution		
*Balance before this payment (see next column)			Amount Paid to Date		
			Retained Percentage		
#Amount Certified for this payment			*Value of Work Done to Date		
*Less 10% (Div. of Accts. only)					
Amt. to be paid (Div. of Accts. only)					

#To be filled in by employee approving payment.

Approved .....

Approved .....

Approved .....

Payment to.....

Name of Firm with whom Contract was Authorized

.....

Street City

Is Authorized Approved for Payment

Amount.....

JAS. F. BROWN, Director of Schools

By.....

Senior Accountant

Pink Sheet for Contractor's File— Blue Sheet for Division Approving Files—White and Yellow for Clerk-Treasurer's Files.

Exhibit F. Form used for monthly payments.

collect a monthly payment, and in this application he states the amount of the requested payment for the work done in the period under review. This application must be certified to the clerk-treasurer, after approval by the inspector and the business manager. The figures are checked against the records, first, of course. White and yellow sheets go to the clerk-treasurer's office, a pink sheet is retained by the contractor, while a blue copy is retained by the division which approved the work.

The Purchase Order. In the case of informal bids, the award is made on a blank designated as a purchase order (Exhibit G). This blank is a nine-part fanfold form, consecutively numbered, which is typed on a billing machine. The different copies are handled as follows:

1. The original is the vendor's copy, printed in blue ink.

2. The duplicate is the accounting copy, printed in brown ink, and sent to the clerk-treasurer.

It should be stated here that both the original and duplicate copies go first to the clerk-treasurer for certification as to funds available. If there are funds in the budget account affected, the clerk certifies the vendor copy, forwards it to the purchasing agent for signature, and for issuance to the vendor, retaining the duplicate.

3. The triplicate, printed in brown ink, is the invoice clerk's copy, and is held in "open" file until the work called for is completed, or the material is received, approved, and an invoice has been received and checked. The invoice and signed receiving copy are then forwarded to the clerk-treasurer for payment. The invoice copy is then date-stamped "paid" and placed in a "dead file."

4. The quadruplicate is printed in green ink, and 5. the quintuplicate is printed in red ink. The two copies last named are sent to the maker of the requisition. In common with all copies of the purchase order, these copies show the requisition number. They are sent to the maker of the requisition in order to show him that a purchase order has been issued. Upon satisfactory completion of the transaction, the maker signs the quadruplicate, or fourth copy, and sends it to the purchasing agent for checking against the invoice by the invoice clerk and for passing on to the clerk-treasurer for payment. The maker retains the quintuplicate, or fifth copy, in his file, together with his copy of the requisition.

In case it is necessary to subject a purchased item to chemical analysis or inspection, this fourth copy is countersigned by the chemist or the inspector.

6. The sextuplicate, is the "office" copy and is printed in black ink. This copy is retained in the purchasing department, and the prices shown on the purchase order are posted to the price record. This record is kept on large cards, headed by commodities. A complete record is kept of all items purchased. The card shows the purchase order and requisition numbers, date purchased, vendor's name, quantity purchased, price paid, and the school or department for which the purchase was made. The purchasing agent has always made available to all interested parties the price paid for any item, the name of the firm from which it was purchased, and the tabulation of bids for any item purchased about which any question arises.

After the sixth copy has been used for entry of figures on the price record, the copy is bound in a book which contains 1000 orders, when completely filled, these copies are filed in the book by order number.

7. The septuplicate is the buyer's copy, and is printed in blue ink. Each buyer keeps a file, alphabetically by vendors' names, of all purchase orders issued by him. This serves as a ready guide for follow-up purposes, and also quick reference if the maker of the requisition or the vendor questions anything concerning the order. The buyer removes his copy from the alphebetical file when receiving copy comes to the purchasing department, so that his open file consists only of live orders which have not been filled.

8. The octuplicate is the requisition copy, and is printed in orange ink. This copy serves as a cross reference, it is filed by requisition number, and is used to find the order number if the maker of the requisition, not having an order copy, should wish any information concerning the disposition of his requisition.

9. The nontuplicate, is the proposal copy, and is printed in purple ink. This copy becomes a part of a complete file, consisting of the requisition and the proposals. These papers are stapled together and filed as a complete document under the purchase order number.

Requisitions from Schools

Two types of requisitions for material are used in the schools. Both types must be properly approved before they can be acted upon.

a) Stores Requisition (Exhibit H). These forms are prenumbered consecutively and are used in requisitioning items from warehouse stock. They must be properly approved before they can be honored. The stores requisition is in triplicate, and only one kind

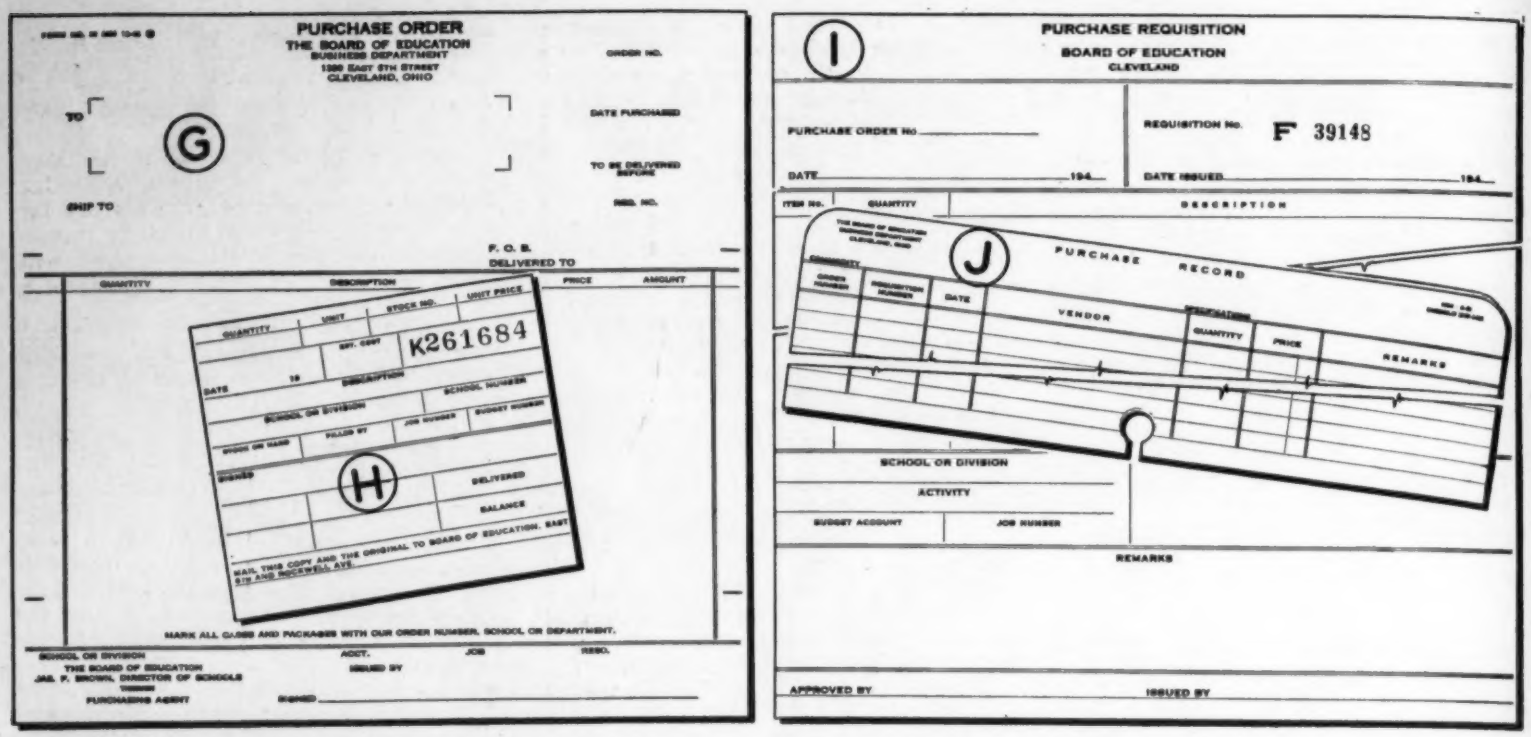


Exhibit G. Purchase Order. Exhibit H. School Requisition. Exhibit I. Purchase Requisition. Exhibit J. Record of Purchases.

of item can be withdrawn on a single stores requisition. The original and duplicate, when approved, are sent to the clerk-treasurer for certification as to funds. The school or department is charged for the item and the cost is deducted from the budget account. If and when certified by the clerk-treasurer, both copies are sent to the warehouse. When the requisition is filled, the warehouse retains the original copy and returns the duplicate to the clerk-treasurer for the deduction of the cost from the particular budget. The triplicate is the file copy for the maker of the requisition.

b) *Purchase Requisition.* This form is prenumbered consecutively, and is in triplicate, and it must also be approved by the appropriate department. This form is used when items are required which are not carried in the warehouse stock, although they may be standard items used by the schools, but not ordered in sufficient quantity to be carried in stock. On this form more than one item may be listed, but all items must be of the same category. The original and duplicate copies are forwarded by the school or division to the department which must approve the request. If approved, the original is forwarded to the purchasing agent for purchase. The purchasing agent will request bids and place the order; or he may consult with the department approving the requisition, or the school or division requesting the material, in regard to the bids, then place the order. The triplicate is retained by the maker of the requisition.

This same requisition form is used when the warehouse requests the stock of an item replenished to the maximum quantity when a set minimum has been reached.

Scope of Operations

In order to provide the Cleveland public schools with the books, supplies, and equipment necessary to educate the children in conformity with the high standards set up by the board of education, the purchases are many and varied and the amount of money expended is great. Approximately 22,000 orders are placed annually for supplies and equipment, with a total yearly expenditure of about $2,500,000.

For heating the schools in Cleveland there are needed some 45,000 tons of coal and 350,000 gallons of fuel oil. The fuel for heating the buildings is contracted for annually, and the most economical fuel for the type of heating plant in a building, and the fuel creating the least smoke, is used. Samples are taken of all coal and fuel oil delivered, and they are tested by a reputable professional chemical laboratory. The methods of sampling coal and the methods of analysis are as prescribed by the American Society for Testing Materials. The board has never purchased coal on a premium-and-penalty basis. Definite specifications prescribing the maximums of moisture, volatile ash, and sulphur content; the minimums of BTU's are set up and coal not equal to the specifications is rejected.

Thirty-four self-supporting cafeterias are operated by the Cleveland public schools, without profit, for the benefit of the pupils. The purchasing agent is charged with the responsibility of furnishing these cafeterias with the necessary supplies and equipment. These purchases amount to approximately $500,000 per year. The average daily number of pupils who eat lunch in these cafeterias is 32,000.

As an example of the quantity and extent of the purchases required yearly by the cafeterias, the following figures show approximately the quantity of major food supplies:

Chopped beef	62,000 pounds
Frankfurters	54,000 pounds
Buns	82,000 dozen
Loaves of bread	62,000
½-pint bottles of milk	2,900,000
Gallons of ice cream	68,000
Cases of No. 10 cans of fruits and vegetables	3,500
Frozen fruits and vegetables	16,000 pounds
Eggs	50,000 dozen
Potatoes	450,000 pounds

Standardization

The number and kinds of items purchased through the purchasing department run into the thousands, yet the items, so far as possible are standardized as to type and quality. This policy of standardization has enabled all of the schools throughout the Cleveland school district to use the same kinds of supplies and equipment and to some extent the procedure in soliciting bids has been thereby simplified. Bids with *detailed specifications* are requested. These specifications are written in this manner in order to insure wide and fair competition on a definite standard of quality.

The United States Bureau of Standards specifications have been adopted whenever and wherever possible and feasible. All materials, supplies, and equipment are subject to inspection or chemical analysis, or both, as the case may be.

Wherever items of other qualities than the qualities specified are found to be more desirable or economical, awards are not made unless all bids are first rejected and new bids requested on the items with the changed specifications noted.

Not only is great care taken to place all bidders on an equal footing through the use of definite and clear specifications, but also great care is taken that the Cleveland schools receive material which measures up to the standards set up on the order, and in the specifications.

Stock Control

The allocation of arbitrary budget quotas to schools and departments acts as an efficient brake on overspending on any one item or class of items. A school has just so much money to use for supplies and equipment

during a 12-month period, and no additions to these quotas are permitted.

This expendable limit on money spending is the principal governor which insures low inventories, strictly kept to current requirements. A teacher or custodian requisitions certain needed items through the principal's office. The principal knows just how much money he can use, and how much is left in his fund. Frequently the amounts represented by the requisitions are shaved down at this point through a careful survey of supplies on hand and a review of future requirements.

Again, when the principal has approved the requisition and sent it on to the proper department at headquarters, it is reviewed by the authorizing officials and their detail workers in view of the warehouse inventory situation and the condition of the market. Here, also, the requisition may be cut or eliminated altogether, without ever reaching the purchasing department.

When a requisition has been properly approved and sent to the purchasing department, it is again checked before the purchase order is issued. For example, a manual training teacher requisitioned four vises of two different sizes. A telephone consultation uncovered the fact that a little different method of handling the pupils in that school would permit the cutting out of two vises on the order, and such a recommendation was made to the business department, with the approval of the teacher and principal involved, which not only saved the ordering of two vises, but cut these expenditures from the debit side of the school's budget, and left that much more for future needs.

In still other instances it was found that items already on hand in the warehouse would answer the same purpose. Wartime conditions necessitated the conserving of supplies and equipment, on account of shortages, and proved a benefit by forcing more ingenious and economical use of materials. These experiences have resulted in permanent improvements in the system of requisitioning by custodians, principals, and teachers.

Thus the *system of checks and rechecks* has proved quite beneficial in overcoming problems of obsolete materials and overstocks of items and complete categories, supplementing the budget system which has been in vogue for a number of years.

Adjusting Standards

The purchasing department maintains large files of catalogs and price lists and keeps them up to date at all times; and through interviews with salesmen, and telephone and letter communications with vendors, local and national, insures a constant in stream of information regarding technological advances and improved qualities in supplies and equipment. Where methods of teaching change, the technical advances in equipment follow, and vice versa. For instance, the expanding use of the radio in the teaching process in the Cleveland schools has brought with it a whole new set of material and supply problems.

It has been found the better part of wisdom, however, to use up the old materials in advance of announcing the acquisition of the new, otherwise teachers lose all interest in the old, and want nothing but the new.

Here again it has been found advisable to keep the inventories down to current requirements to prevent the accumulation of obsolete, shelf-worn, or damaged materials. In many instances the purchasing department has been able to dispose of unsuitable material, as for example, the sale of a number of 12 by 16-in. lockers, which were found too small for school use, but when sold to second-hand dealers, quickly found their way into the hands of the proprietors of bowling alleys.

Standards are high, but are constantly undergoing adjustment in view of changing conditions, thus insuring an open mind to all improved teaching processes. When an item is suggested which appears to offer advantages over the items in current use, prompt consideration is given to its installation for more efficient educational promotion. The purchasing department not only welcomes suggestions for improvement, but frequently suggests improvements to manufacturers and vendors.

Inspection of Goods

Chemical analysis is applied to all items which require such inspection, and a careful physical examination is provided for other materials and equipment. Where heavy expenditures are involved, field inspectors make a thorough inspection and an exhaustive report before the shipment is made, thus estopping goods which fail to come up to specifications, and which must be made right before they are delivered to the schools. Sometimes these items are summarily rejected before delivery and new bids are taken, or negotiations are initiated which correct the deficiencies and bring the equipment up to the required standards.

Vendors' Relations with Schools

Vendors who are known and satisfactory regularly receive proposal blanks when items in which they are interested are under consideration. In addition, any established vendor may request and receive an invitation to bid.

Specifications are made very clear and precise as to quality, grade, size, delivery, and amount, so as to prevent any misunderstanding.

Vendors who prove unsatisfactory are taken off the mailing list and receive no further invitations to bid, but these are few and far between, as the high standards of the department and its strict requirements are well known, as well as the necessity of making a substantial deposit with the bid.

The purchasing department has established a reputation for fair and cordial dealing with honest vendors over a long period of time, and business men realize the necessity of reciprocating with honest goods and living up to their obligations if they wish to enjoy the continued patronage of the board.

PERSONAL NEWS

► Alex Jardine, of Evansville, Ind., has been elected superintendent at Moline, Ill.

► Edwin J. O'Leary, of Burnt Prairie, Ill., has accepted the superintendency at Oglesby.

► D. T. Cooper has been appointed director of instruction for the public schools of Paducah, Ky.

► Mark Bills, of Fort Wayne, Ind., has accepted the superintendency at Flint, Mich.

► Dr. Harry A. Burke, of Great Falls, Mont., has been elected superintendent of schools at Omaha, Neb., on a three-year contract.

► Supt. W. E. Derr, of Monroe, S. Dak., has been re-elected for another year.

► John Dale Russell, formerly professor of education at the University of Chicago, has been appointed director of the Division of Higher Education in the U. S. Office of Education. He succeeds Fred J. Kelly, who has retired after 15 years' service.

► Joseph F. Donovan, in the Navy Reserve since July, 1944, has returned to his duties as superintendent of schools in Tupper Lake, N. Y. Mr. Donovan entered the service as a Yeoman 3/c, received a commission, and spent the past two years as a lieutenant, senior grade. He was for two years operations officer with Fleet Air Wing 2 of the Pacific Fleet.

Proposed Addition, Madison Vocational and Adult Education School, Madison, Wisconsin.

The citizens of Madison, Wisconsin, have approved a referendum for $1,000,000 for a six-story addition to the present Vocational School building. The addition will be devoted almost entirely to shops and laboratories. The Board of Vocational and Adult Education expects to proceed with this building when government priorities on materials are removed.

The first unit of the Vocational School building was erected in 1920, and with the completion of the whole project the Madison Vocational School will have one of the finest vocational school buildings in the middle west, and will be able to take care of all of the new activities expected to come in the vocational school field.

Law, Law, Potter and Nystrom of Madison, Wisconsin, are the architects.

The Characteristics and Control of Radiant Heating Systems

H. W. Alyea[1]

The human body is constantly generating heat. Under normal conditions, the oxidation of food taken into the body generates more heat than is required for internal functions, with the result that some means of dissipating the excess is necessary. The body has its own heat regulating system for this purpose, and maintains the body temperature at a uniform value, provided that the conditions surrounding the body are within certain limits. Most of the heat is dissipated by convection, radiation, and evaporation from the external surface of the body, although a small amount is lost in the respiratory tract through heating of the air which is breathed, and by evaporation.

The convection loss is the heat carried off from the exposed portions of the body and clothing by the passage of air over them, and varies with air temperature and rate of movement. The radiation loss is the heat radiated by the body to any cooler object, regardless of the temperature or movement of the intervening air, and varies with the temperature difference between the body and the object. The evaporation loss is the heat required to change moisture on the surface of the body into vapor, and varies with the amount of moisture produced. An average sized sedentary adult produces about 400 British thermal units (Btu's) of heat per hour, which must be dissipated if a feeling of comfort is to be maintained.

By means of control over the moisture given off through the skin, the body is able to regulate the amount of heat dissipated by evaporation. By expansion and contraction of blood vessels near the skin, the body surface temperature is varied, which regulates, to some extent the heat lost by convection and radiation. Finally, by involuntary muscular activity (shivering), the body is able to increase the rate of heat production. All of these factors enable the body to maintain a balance between the rate of heat production and the rate of heat dissipation, and a surprisingly uniform body temperature results. A feeling of comfort, however, is obtained only if this uniform body temperature can be achieved without overtaxing any of the heat regulating means.

If the radiation and convection losses are too low, excessive perspiration results, and the feeling of comfort is lost. If the radiation and convection losses are too high, the total loss is excessive even with the minimum amount of evaporation, and the body resorts to shivering to increase the rate of heat production. Thus, it is seen that the feeling of comfort depends upon the manner in which the heat is lost, as well as upon the total amount of heat lost.

When a feeling of comfort exists, the environmental conditions are such that about one fourth of the 400 Btu mentioned above is lost through evaporation and respiration. It is the function of a heating system to produce an environment in which the convection and radiation losses will make up the remainder of the total required loss, which is about 300 Btu per hour. In order to discuss this regulation of the convection and radiation losses from the body, it may be well to investigate further the means by which these losses are brought about.

How Radiant Heat is Transmitted

Radiant heat is transmitted from any object to a cooler one by means of rays similar to light rays, except that they have a longer wave length. These rays travel at the same speed as light and may be reflected or absorbed in the same manner. The heat received from the sun is radiant heat. Most of the heat from an open fireplace is radiant heat. Radiant heat rays pass through the air without changing its temperature, and, in fact, have no effect until absorbed by some solid object. The skin temperature of the human body, under conditions of comfort, is about 83° F. The human body is, therefore, a source of radiant heat for any object which is at a lower temperature. Conversely, any object which is at a temperature higher than that of the surface of the human body transmits radiant heat to it.

Convected heat is transmitted by means of air movements. Air is heated in passing over a warm object, and gives up this heat when it passes over a cooler object. The fact that air expands upon becoming warmer aids in producing air movement and makes the distribution of heat by convection easy.

From the preceding discussion, it is apparent that the losses by radiation and convection, which should be about 300 Btu per hour, may be brought about by various combinations of the two means. In the conventional radiator heating system, about two-thirds of the loss is by radiation. The radiator warms the air, thus reducing the loss by convection. Since the radiator itself is warmer than the human body, some heat is radiated to the body from the radiator. However, the enclosing surfaces of the room (walls, floor, and ceiling) will not be warmer than the air, and those surfaces which are exposed to low temperatures on the opposite side (outside walls, ceilings below an unheated attic, etc.) will have a temperature considerably lower than the air temperature. Generally speaking, all of the surfaces in a room heated by radiators will have surface temperatures lower than the average temperature of a clothed body, and it is to these cool surfaces that the radiation loss from the body takes place.

In order to reduce this radiation loss, it is necessary to increase the temperature of the surfaces enclosing the room. This can be accomplished by applying the heat directly to the surfaces rather than to the air. At the same time, the convection loss must be increased proportionately by reducing the air temperature. The result is a "Radiant Heating System."

How Radiant Heating is Applied

It is neither necessary nor practical to apply this heat to all of the room surfaces. The various surfaces all may be at different temperatures, yet they will produce an effect equal to that produced if all were at one intermediate temperature. This intermediate value is called the "Mean Radiant Temperature" (MRT).

Neither is it practical to concentrate all of the heat into a small area of one of the surfaces. The small high temperature area would result in a gain in radiant energy on one side of the body, and a excessive loss on the other sides. The result would be similar to that produced by an open fireplace, and it is not considered good design if the body is required to keep turning continually in order to produce a feeling of comfort.

Most radiant heating systems are so arranged that the heat may be applied to either the entire floor or entire ceiling area, although the walls are sometimes used. Energy is radiated from this heated surface to all other surfaces in the room. These surfaces absorb some of the heat and reflect the rest, and this reflected portion, in turn, is partly absorbed and partly re-reflected by other surfaces, until finally all of it has been absorbed by some solid object. The distribution of radiant heat throughout a room is analogous to the distribution of light by an indirect lighting system, and results in increasing the temperature of all of the surfaces enclosing the room.

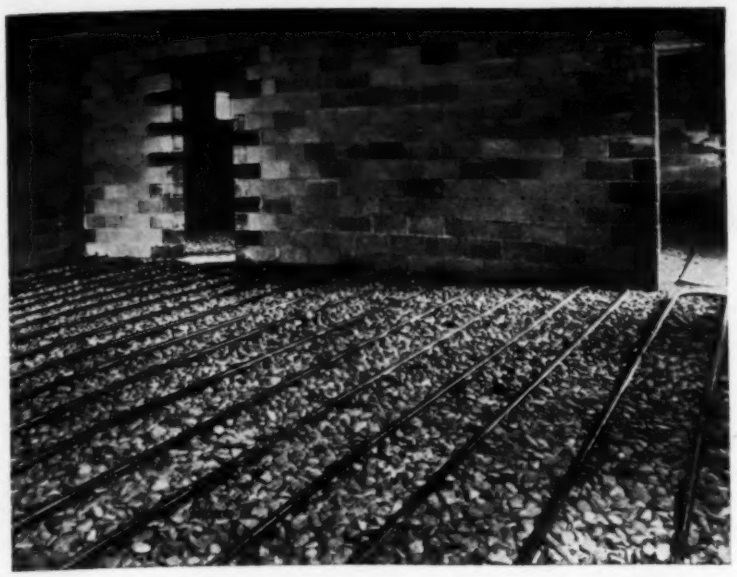
The distribution of radiant energy described in the preceding paragraph has no effect on the temperature of the air. However, air that comes in contact with the heated surfaces becomes warmed, and in a normally "tight" building without forced ventilation, the air temperature will approach the mean radiant temperature.

In a radiant heating system in which the floor is the heated surface, the air which is heated by the floor tends to rise. This aids in the circulation of air, and in the distribution of heat throughout the total air volume. If the ceiling is the heated surface, the air in contact with the ceiling tends to remain there, with the result that there is a thin layer of warm air just below the ceiling. The air temperature throughout a room will be higher when the floor is the heated surface than it will be when the ceiling is the heated surface. The effect of heated walls will be somewhere in between the two.

Advantages of Radiant Heating

It is apparent that, just as in the case of a direct radiator heating system, the body loses heat by both convection and radiation when a radiant heating system is used. However, regardless of where the heated surface is located, the radiant component of the loss will be

[1]Engineering Department, Johnson Service Company, Milwaukee.



Radiant Heat Piping before laying of finish floor (Courtesy A. M. Byers Co.).

less, and the convection component will be greater than is the case where a direct radiator system is employed. A breakdown of the relative values of the two losses would be somewhat as follows:

Location of heated surface	*Per cent of convection loss*	*Per cent of radiant loss*
Floor	50 to 60%	40 to 50%
Wall	55 to 65%	35 to 45%
Ceiling	60 to 70%	30 to 40%

While it is true that a conventional radiator heating system will produce acceptable conditions of comfort, many proponents of radiant heating insist that the conditions produced by a radiant heating system result in an entirely different sensation of comfort. The body is not aware of the source of heat. The air temperature is usually lower than that produced by the radiator system, and therefore feels fresher. Furthermore, the air receives its heat from a low temperature surface and does not have the odor which is commonly noticed in air which has been heated to a high temperature. Under otherwise comparable conditions, the relative humidity of the air will be slightly higher because of the lower air temperature.

Aside from these physiological considerations, the advantages of radiant heating may be listed as:

1. **The flexibility of room treatment and saving of space resulting from the elimination of radiators.**
2. **The reduction of surface discolorations because of less air movement and lack of concentrations of high temperature air.**
3. **The elimination of objects which collect dust and dirt.**
4. **Possible lower operating costs because of reduced heat losses resulting from the smaller differential between outdoor and room temperatures, and from the fact that the heat is not introduced at the cold outer walls, or below windows, as is the case with direct radiator systems.**
5. **Less temperature differential between floor and ceiling than is possible in a room heated by radiators. This is particularly desirable in classrooms accommodating small children.**

Types of Radiant Heating Systems

There are several ways of adding heat to one or more of the enclosing surfaces of a room. The heated surface is generally called a "radiant panel" and the heating medium may be water, steam, or air. When either water or steam is used, the pipes or tubes carrying the heating medium are usually embedded in the building structure. If air is used, the radiant panel is often constructed of hollow tile, which serve also as the air ducts. In other cases the space between the joists may serve as air passages. Air as the heating medium has limitations, because the type of structure required confines its use generally to floor panels. The use of steam is limited because its high temperature greatly multiplies the problems due to expansion and contraction of the materials involved. By far the largest number of radiant heating systems have employed pipe or tubing coils embedded in the building structure, through which hot water is circulated. The remainder of this article will be based on the assumption that this latter arrangement is used.

Numerous factors enter into the proper design of a radiant heating system. The lowest outdoor temperature at which the system will be expected to produce comfort conditions (called the design temperature) is selected. The heat loss from the building, or any portion of it, can be computed from this design temperature and from the desired indoor temperature, as soon as the building structural plans have been completed. Then, there remains the selection of the panel location, the size and spacing of the pipes or tubing, the selection of the water temperatures and quantities required, and the design of a proper control system.

Location of Radiant Panels

Floor panels usually are better adapted to single story buildings than are ceiling coils. A limiting factor in the use of floor coils is the maximum temperature permissible without making the floor feel uncomfortably warm. An 85° surface temperature for occupied sections of floors is generally considered the maximum. If calculations show that the maximum temperature will not provide sufficient heat, then one of several alternatives must be adopted:

1. **Sometimes the borders of floor areas, and other locations such as corridors, entryways, etc., which receive only transitory use, are operated at higher temperatures than the more frequently used portions.**
2. **Supplementary surfaces may be installed in walls or ceilings to make up the deficiency in the heat output of the floor areas.**
3. **If forced ventilation is used in conjunction with radiant heating, the temperature of air supplied is sometimes made high enough to carry part of the heating load at low outdoor temperatures.**

Ceiling surfaces may be maintained at considerably higher temperatures than those in floors and, therefore, seldom have to be supplemented by additional radiant surfaces in walls or floors. The maximum temperature permissible in ceiling panels increases with ceiling height, but at the same time the effectiveness of a ceiling panel decreases with height. Therefore, ceiling panels are not used where extremely high ceilings exist. Neither are they used where ceilings are abnormally low, because the nearness of the source of heat produces an uncomfortable effect. Generally the ceiling structure is less massive than the floor structure, with a consequent smaller heat storage capacity, and there is less time lag between a change in the heat input to the coil and the heat output from the surface.

Wall panels are most commonly used to offset the low radiant temperature existing near window areas, or to supplement floor or ceiling panels.

Other methods of offsetting the low radiant temperature of window areas and outside walls are often used. One common arrangement is to lay the coils, either ceiling or floor, so that the hot water inlet is at the point nearest the outside wall, and the return connection is at the point farthest from the outside wall. With this arrangement, the temperature of the radiant surface becomes progressively cooler as the distance from the outside wall increases. Another method is to provide a separate narrow zone adjacent to the outside walls, in which the radiant surface temperature is kept at a higher value than for the rest of the area.

Design of the Coil

The design of the coil which is to be used to heat the radiant panel involves many factors which must be considered simultaneously. The maximum total heat output required of the radiant panel is equal to the heat loss of the space under design conditions. This output, divided by the number of square feet of available space in the panel selected, gives the required heat output per square foot. Knowing the material from which the panel is to be made, it is possible to compute the temperature of the panel surface required to produce this output. If this temperature is higher than the permissible maximum, then additional panel area must be provided, or, if forced ventilation is to be used, this forced ventilation must carry part of the heating load. The maximum panel temperature thus established, the maximum water temperature, the temperature drop in passing through the coil, and the quantity in gallons per minute may be computed. At the same time, the size and spacing of the pipe or tubing must be considered, because there are many combinations of the various factors which will produce the required panel temperature. However, there is usually one combination which will result in the lowest over-all cost, considering both initial investment and operating expense.

(To be concluded in August)

Practical Factors in the Design of All Day Trade Schools *H. W. Paine*

(Continued from June)

Automotive Repair

Each shop to accommodate 25 students.

Shop Classifications

1. Automotive service shop
2. Body and collision service shop
3. Beginning repair shop
4. Automotive electrical shop

Shop Details

1. Shop size — all shops 60 by 80 or 90 ft. (Should be located together.)
2. Service and collision service shops should have two outside doors each, 12 by 12 ft. Other shops, one outside door each, 12 by 12 ft. (Also hall doors 10 by 10 ft., and 3 by 7 ft. 8 in.)
3. Floors — concrete (treated)
4. Conference room (one for each shop, 18 by 20 ft., with blackboard, cabinets, file, teacher's desk, and tablet-arm chairs for 25 students)
5. Wash and locker room, 15 by 20 ft.
6. Tool room, 8 by 10 ft., next to conference room.
7. Bench space and vises. Benches along one side of room, equipped with 10 vises.
8. Overhead hoists on tracks in service and collision service shops.
9. Spray paint booth in collision service room only.

Notes: Locate all equipment so as to facilitate movement of cars. Provide electrical outlets, gas, air, water, in all rooms. Meet code specifications for storage of oils, lacquers, etc.; also for spray painting booth.

Aeronautics Repair

Shop Classifications

1. Engine repair shop
2. Airplane construction repair

Shop Details

1. Shop size — engine repair shop, 45 by 90 ft.; airplane construction repair shop, 60 or 70 by 90 ft. No posts.
2. Outside doors, Engine repair — one 12 by 12 ft. Airplane construction repair — hangar doors on whole end of shop, if possible, opening on concrete ramp or opening onto hallway apron. Also 10 by 10 ft. door opening onto hallway in addition to the standard 3 ft. by 7 ft. 8 in. door.
3. Floors — concrete (treated).
4. Conference rooms 18 by 20 ft., both rooms, same as for automotive-repair shop.
5. Wash and locker room 15 by 15 ft., both rooms. Same as auto mechanics.
6. Tool rooms, 8 by 10 ft. — both rooms.
7. Bench space and vises — along one side of each shop — 10 vises.
8. Overhead hoists — on tracks in both shops.
9. Spray paint booth. In airplane construction repair shop large enough to accommodate wings.

Notes: Locate all equipment so as to facilitate movement of planes, etc. Other shops, if necessary for beginning students, should be similar to engine repair shop.

Machine Shop

Shop Classifications

1. 1 advanced shop.
2. 1 intermediate shop
3. 2 beginning shops.

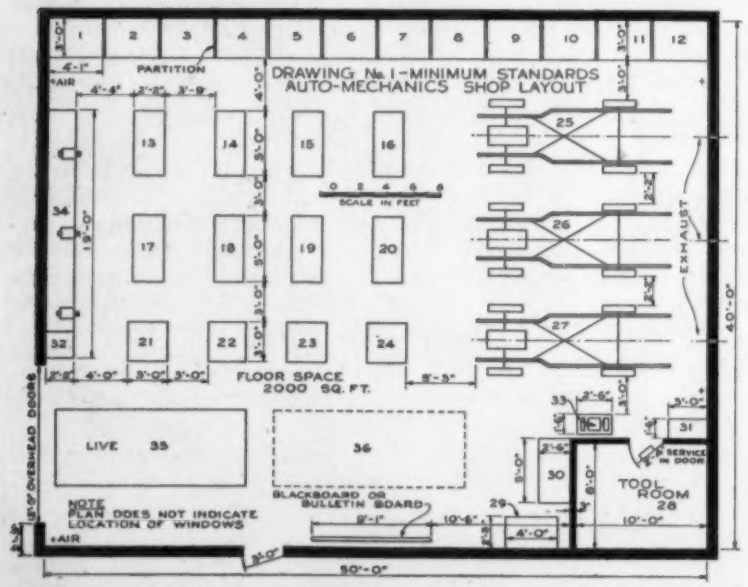
(To be adjacent to each other, if possible.)

Shop Size

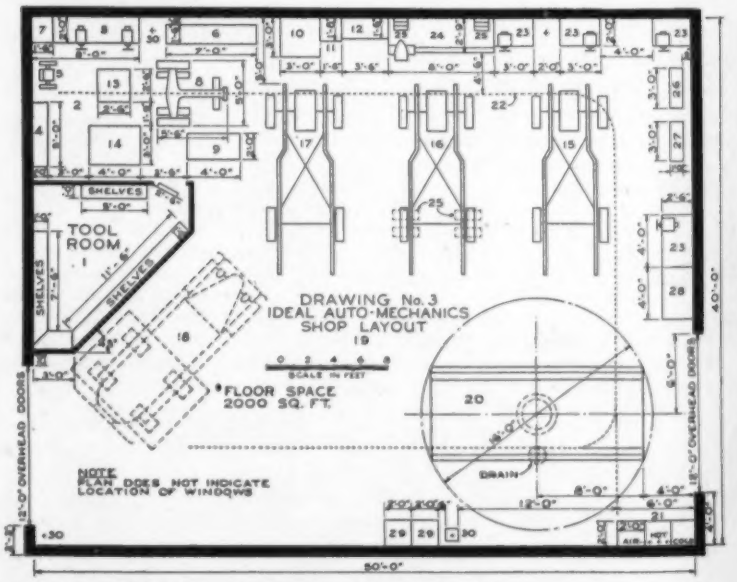
1. Advanced room, 60 by 90 ft.; intermediate room and beginning rooms, 45 by 90 ft.
2. Outside doors, same as auto repair shop. One 12 by 12 ft. on each shop. (Also 10 by 10 ft. and standard door opening onto hall.)
3. Floors — concrete (treated).
4. Conference rooms, 18 by 20 ft. for each shop, same as for auto-repair shop.
5. Wash and locker room, 15 by 15 ft., for each shop, same as for auto repair.
6. Tool room, 8 by 10 ft. for each shop.
7. Bench space and vises along one side of room — 15 vises.

Notes on Location of Machine Tools

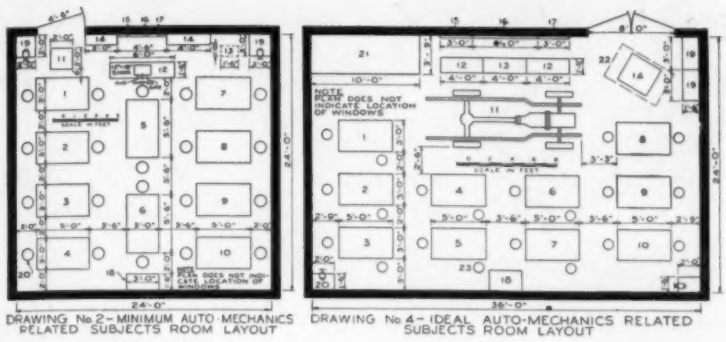
1. Lay out by use of scale section paper and scale models.
2. Leave clearance space and easy access.
3. Provide for proper routing of work and for assembly floor space in advanced shop.
4. In locating lathes, angle *right* side of tailstock toward outside windows so as to re-



Floor plan for minimum standards auto-mechanics shop. 1. Generator, cut-outs, voltage regulators; 2. starting motors, drives and controls; 3. distributor coils, condenser; 4. instruments; 5. wiring; 6. magnetos; 7. spark plugs; 8. Diesel fuel pumps, injectors; 9. fuel pumps (gasoline); 10. Carter carburetors; 11. Stromberg carburetors; 12. cutout gaskets; 13. Ford engine, external job; 14. Ford engine, internal job; 15. Plymouth engine, external job; 16. Plymouth engine, internal job; 17. Chevrolet engine, external job; 18. Chevrolet engine, internal job; 19. engine, miscellaneous; 20. Diesel; 21. transmission overhaul; 22. clutch, universal joint, overhaul; 23. rear axle differential, overhaul; 24. steering gear overhaul; 25. chassis, Ford, complete; 26. chassis, Chevrolet, complete; 27. chassis, Plymouth, complete; 28. tool and parts storage; 29. air compressor; 30. small engine lathe; 31. garage press; 32. small drill press; 33. grinder and wire buffer wheel; 34. workbench and vises; 35. space for live job and assembly; 36. space for live job and assembly



Floor plan for ideal auto-mechanics shop. 1. Tool and parts storage; 2. overhaul bay for unit repairing; 3. bench; 4. battery charger; 5. grinder and wire buffer wheel; 6. small lathe; 7. drill press; 8. rear axle overhaul stand; 9. valve reconditioning unit; 10. electrical test; 11. electrical test; 12. electrical test; 13. brake drum lathe; 14. engine repair stand; 15. fender body and painting; 16. brake front and headlights; 17. major overhauling; 18. motor tune-up (dynamometer optional); 19. general service and radio; 20. revolving hoist and lubrication and wash rack; 21. pressure washer and tubs; 22. chain block and track; 23. portable service benches; 24. headlights, testor portable; 25. brake testor and gauges optional; 26. welding outlet; 27. power bending unit; 28. lubricating equipment; 29. cleaning tanks; 30. air outlets


DRAWING No. 2 – MINIMUM AUTO MECHANICS RELATED SUBJECTS ROOM LAYOUT
DRAWING No. 4 – IDEAL AUTO-MECHANICS RELATED SUBJECTS ROOM LAYOUT

Drawing No. 2. Floor plan for training station. 1. Measuring instruments used in automotive trade; 2. work, power, friction; 3. mechanical levers, gears, belts, chains; 4. heat expansion; 5. vacuum, air, mechanical gases; 6. fuel, lubricating, minerals, liquid and testing; 7. electricity magnetism instruments; 8. lights, generators and starting motors; 9. mechanical hydraulics; 10. physics of electronics and radio; 11. electrical test bench, portable; 12. chemistry, physics, demonstration table (sink); 13. desk; 14. storage lockers; 15. blackboard; 16. screen; 17. charts; 18. projector; 19. benches, vises; 20. stools

Drawing No. 4. Floor plan for training station. 1. Measuring instruments used in automotive trade; 2. work, power, friction; 3. mechanical gears, levers, belts, and chains; 4. heat expansion; 5. vacuum, air, and mechanical gases; 6. fuel, lubrication, minerals, liquid, testing; 7. electricity, magnetism and instruments; ignition; 8. lights, generators, and starters; 9. mechanics of hydraulics; 10. physic of electronics and radio; 11. cutaway chassis; 12. chemistry, physics, demonstration; 13. sink, air, water, gases; 14. electrical test bench, portable; 15. blackboard; 16. screen; 17. chart; 18. projector; 19. storage lockers; 20. small benches and vises; 21. probing dynamometer; 22. magnaflux operating (optional), portable; 23. stools

Vocational trades and industries — shop layout, Portsmouth High School, Portsmouth, Ohio. 1. Surface grinder; 2. 16-in. lathe; 3. 16-in. lathe; 4. 14½-in. lathe; 5. 14½-in. lathe; 6. 14½-in. lathe; 7. 14½-in. lathe; 8. 13½-in. lathe; 9. 13½-in. lathe; 10. 13½-in. lathe; 11. drill press; 12. drill press; 13. tool and cutter grinder; 14. grinder; 15. band saw; 16. bench with 10-in. lathe; 17. 13½-in. lathe; 18. 10-in. lathe; 19. 10-in. lathe; 20. milling machine; 21. shaper; 22. shaper; 23. drilll press; 24. planer; 25. forge; 26. heat-treating furnace; 27. drill press; 28. grinder; 29. 8-in. lathe; 30. grinder; 31. valve grinder; 32. riveting bench; 33. Pratt and Whitney 985; 34. Pratt and Whitney 1830; 35. Pratt and Whitney 1830; 36. Pratt and Whitney 1340; 37. Allison engine disassembly; 38. Allison engine disassembly; 39. Allison engine disassembly; 40. Wright 2600; 41. heat-treating furnace

ceive light on headstock. When student lifts eyes he looks into darkened room, not into the bright outside light. Use similar precautions in locating other machine tools.

5. Provide overhead buss bar wiring with separate overhead cut off switches for each machine in addition to operating switch.

6. Arrange for quick travel by instructor to any part of shop.

7. Observe all safety and code requirements.

Welding Shop

Shop Classifications

1. Welding is usually considered to be a tool of many trades, therefore students from machine, auto, aero repair, etc., will receive welding training as part of the shop experience of their trade. However the characteristics of the work are such that a separate well-ventilated shop should be provided for it.

Shop Details

1. Shape and size of room, 45 by 90 ft.

2. Outside doors. One 12 by 12 ft. Also 10 by 10 ft., and standard door opening onto hall.

3. Floor — concrete (treated).

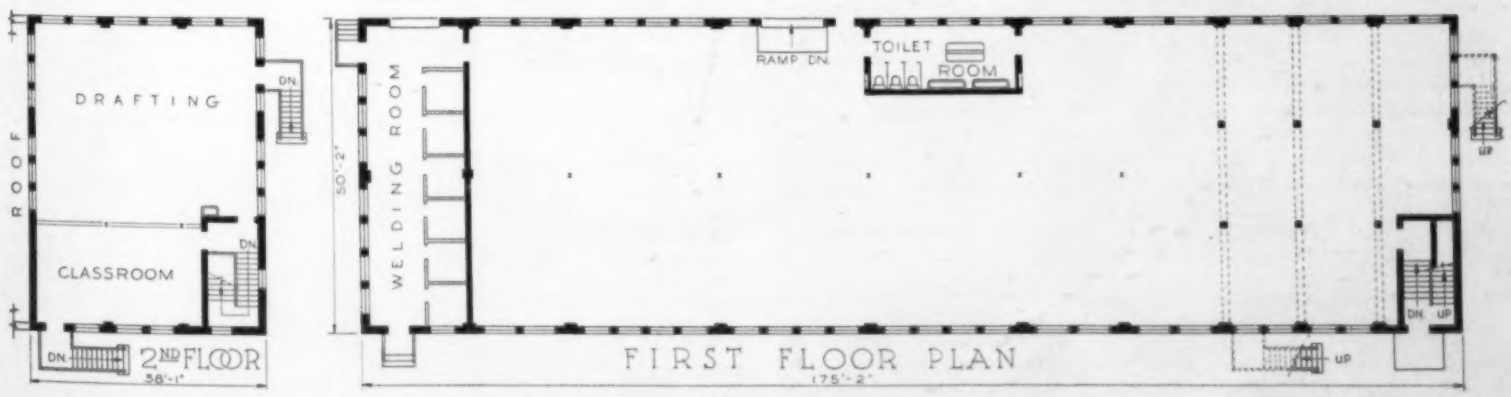
4. Conference room, 18 by 20 ft., same as for auto shop.

5. Wash and locker room, 15 by 15 ft., same as for auto shop.

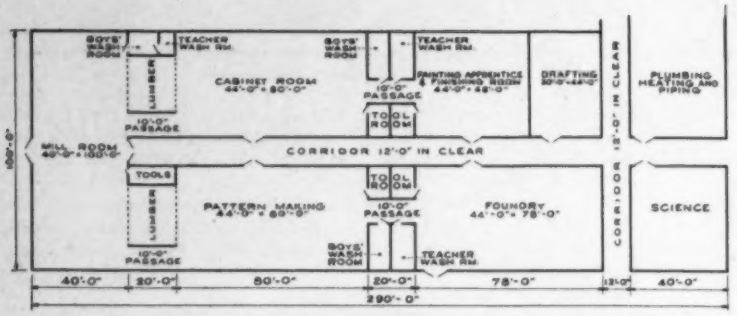
6. Tool room, 8 by 10 ft., same as for auto shop.

7. Bench space and vises, 30 ft. bench with 5 vises.

8. Booths and equipment: Booths must be provided with curtains and ventilation for electric arc welding. Acetylene welding to be done on properly spaced firebrick-topped welding tables. Acetylene and oxygen should be carried to individual tables through overhead manifold system allowing housing of gas containers in outside fireproof building or



Floor Plans, Vocational High School, Marion, Ohio.



Suggested layout for cabinetmaking, patternmaking, and allied trades shops.

Shows use of cutouts on scaled cross-section paper.

cabinet. Provide a few regulation standard, portable-type gas welding outfits. Provide overhead-buss-bar distribution of power for electric welders with separate switch for each unit in addition to operating switch. Use scaled section paper and scale models for layout purposes. Provide easy access to all parts of room.

Cabinet, Millwork, and Patternmaking

Shop Classifications

(1) Pattern shop, (2) mill room, (3) Cabinet shop. Note: If a foundry is to be included, it should be located next to the pattern shop.

Shop Details

1. 45 by 90 ft. for millwork and pattern shop; 60 by 90 ft. for cabinet shop, with 20 by 30 ft. finish room. These rooms should be adjacent and so arranged that millroom containing most of the power equipment is located between the other 2 shops in order to rough out material for both. If foundry practice is to be taught, that shop should be located adjacent to pattern shop.

2. Outside doors, 12 by 12 ft. for each shop. Also 10 by 10 ft. and standard door opening onto hall.

3. Floors — wood.

4. Conference rooms, 18 by 20 ft. for each shop, same as auto mechanics, or adjacent shops may probably arrange to use one room.

5. Wash and locker rooms, 15 by 15 ft., same as for auto mechanics.

6. Finish room, 20 by 30 ft. in cabinet shop.

7. Tool room, 8 by 10 ft. for each shop.

8. Lumber storage-racks for mill room should be located close to outside door.

9. Workbenches — cabinetmakers' benches in cabinet shop and pattern shop.

10. Location of machine tools and benches. Use scaled cross-section paper and scale models to locate equipment and benches in all rooms. Provide proper working spaces around power equipment.

11. Shaving and dust collecting systems — equip all power equipment, and provide as short runs as possible to outside collector. Observe all possible precautions to control and isolate fire in collector area.

Printing

Shop Classifications

1. Composition room.
2. Press room.

Shop Details

1. Shop sizes — 45 by 90 ft.
2. Outside doors. For press room, 12 by 12 ft. Also 10 by 10 ft. and standard door opening on hall.
3. Floor — Battleship linoleum or plastic.
4. Conference room, 18 by 20 ft. for each room, same as for auto mechanics.
5. Washroom, 15 by 15 ft.
6. Stock room, 10 by 15 ft.
7. Dark room for composition room, 15 by 15 ft.

Equipment, for composition room — locate type cases, tables, photo equipment with scaled cross section paper and scale models. For press room — locate press-room equipment to facilitate production. Use scaled cross-section paper and scale models.

Electrical, Communications and Radio, and Beginning Electricity

Shop Classifications

Shops should be adjacent and will vary according to activity needs only.

Electrical shop should have provisions for house wiring practice.

Shop Details

1. Shop size, 45 by 90 ft.
2. Outside door, 12 by 12 ft. Also 10 by 10 ft. and standard doors opening on hall.
3. Floor — concrete.
4. Conference room, 18 by 20 ft. for each room, same as for auto mechanics.
5. Washroom, 15 by 15 ft.
6. Tool room, 8 by 10 ft. for each shop.
7. Equipment and benches.

When separate beginning-electric, advanced-electric, and communications shops are set up, the beginning shop should contain provisions for elementary wiring and experimental work. The advanced shop should contain house wiring and motor repair, while the communications and radio would include equipment devoted to those activities. Use scale floor plan models and cross-section paper for locating benches and equipment.

(To be concluded in August)

MAINTAINING SCHOOL PROPERTY

The old saying that "schools are big business" is rarely appreciated by the average citizen or even by the citizen who is in position to understand — the school-board member. In the latest annual report of Supt. Charles C. Mason, of Tulsa, Okla., there are two tabulations that make the immensity of school operating and maintenance problems clear by a comparison with the number of homes in the community. Assistant Supt. J. Roy Inbody, in charge of business affairs, has estimated that the Tulsa schools are faced with operating and maintenance problems comparable to those of a small town comprised of 453 to 1653 homes. The pupil population served in this "small town" totals approximately 32,000 boys and girls. Mr. Inbody's tabulation follows:

Comparison of Certain Items of School Properties with Similar Items in the Average Five Room Home

	Totals for all schools in Tulsa	*Number of average five-room homes this total represents*
Total feet of floor space all buildings	1,983,908	1,653
Total outside doors	1,170	585
Total windows	13,321	832
Total window glass area in sq. ft.	285,824	2,382
Total number of washbasins	1,201	1,201
Total number electric light fixtures	12,690	1,440
Total number water faucets	3,171	453
Total roof area in square feet	1,517,194	11,012
Total number of toilet stools	1,412	1,412

The care of the Tulsa school buildings involves not only the operation of the heating plants and the daily cleaning of buildings and grounds but a huge job of repairs and maintenance. Mr. Inbody's records for the school year 1944-45 show the following jobs performed by the schools' staff of mechanics:

Craftsman	*Number of service calls 1944-1945*
Brickmason	95
Carpenter	887
Electrician	1014
Engineer	20
Laborer	498
Machinist	454
Mechanic	279
Painter	505
Plasterer	85
Plumber	945
Roofer	187
Shade-furniture-locker-termiting	282
Steam fitter	307
Tinner	116

In all cases the number of service calls represents the number of jobs. The chart gives no time information: some of these jobs required only a few hours for completion, while many required several days.

► Minneapolis, Minn. At the suggestion of Supt. W. E. Goslin, the board of education has voted to adopt a new revised salary schedule for all types of clerical employees, effective for a period of one year. The schedule provides new minimum and maximum salaries for clerks, stockmen, telephone operators, and timekeepers for periods of service, ranging from one to five years.

Who Is Going to Push Who Around?

A Proposal For Dealing With Pressure Groups

George A. Preucil[1]

As a school board member I am in the freshman class. I came on our board last spring. I have had no special training in educational work. I am strictly a layman.

When asked to discuss, "How Should Pressure Groups Be Handled?" I frankly hesitated. However, the subject matter implies problems and people and wherever we have problems involving people, whether one person or group, I believe we will have more satisfactory solutions if we use intelligently a simple, practical, four-step procedure for solving such problems.

The four-step procedure is:

1. Get the facts.
2. Weigh the facts and decide on the action that should be taken.
3. Take that action.
4. Check the results.

How should pressure groups be handled? How should any problem in human relations be solved? By problems I mean any situations involving a conflict of interest that requires some action to be taken. We are confronted with a problem in any situation that calls for a decision. From my experience in business and other fields, I am led to commend to you for consideration, the following formula for use in such situations. When we as individuals or as members of a group become involved in a problem, it is important, first and foremost, that we determine our objective and be able to state it clearly. Write this objective down. It is important. It is what we seek to accomplish by solving the problem. Then let us endeavor to apply the following four-step procedure.

Get All the Facts

First, we should be sure to get all the facts. It is well to remember that there are at least two sides to every story. Therefore, we must be sure that we have the whole story. We must review the record and verify in our minds what happened. Are established rules and procedures involved? If so, what are they? We should get the facts firsthand in so far as possible, from the individuals concerned, taking care, however, not to become embroiled in argument. The opinions and feelings of others who may be directly involved or who may be able to add new information should be obtained where it bears on the situation.

Be Sure to Get the Whole Story

Our next step is to weigh the facts and decide on what action should be taken. It is important that we fit the facts together and consider carefully their bearing on each other. In doing this, we must check past practices and policies which may have a bearing.

What courses of action are open to us? At this point we should consider the result of each possible action by checking to see whether it will accomplish the objective we seek and whether the effect will be best for the individual, group or community involved. We must not allow ourselves to jump at conclusions.

Take Action

How is the matter going to be handled? Action resulting from a sound decision can be bungled. Time your action carefully. Action following board decisions should not be left to individuals or even the administration to carry out when assistance from other members is likely to be more effective. Proper timing of the action is likely to affect the results also.

Check the Results

It is always important to consider what follow-up is necessary and when. Does the situation require periodic checking in order to note possible changes in attitudes or relationships? We should also ask ourselves whether our action accomplished the objective we sought and whether it was best for the individual and school or program involved.

If a problem is not well solved in its simplest form when it first becomes apparent, it will almost surely reappear later in a situation more serious and more involved than before. In the meantime its disturbing elements have been spreading.

It is important that even the simplest problems be properly solved. Therefore, they can well be handled by formula to make sure the solution accomplishes the objective and produces the best result for the individual group, community or program involved.

For the purpose of this discussion let us assume a hypothetical situation:

We are in the midst of a board meeting. The items on the agenda are being checked off at a rate that will permit the meeting to adjourn by 10:00 or 10:30. While we are listening to the superintendent's report on the success of the revamped physical education program, we become aware of a commotion down the hall, sounds of voices and footsteps getting louder, until finally they seem to come from just outside the board room. Then a sharp knock on the door. We all turn toward the door and the board president calls, "Come in." The door opens and probably fifty or sixty fellow citizens crowd rapidly in. From the expressions on their faces you know this isn't going to be a meeting of one big happy family. Then the spokesman turns to the board and says, "We are here because we're not going to stand for it, and we demand that you do this and do that, and we are going to hear you say you will before we leave here tonight." No one on the board had any idea that such a mess was brewing, but here it was, right in our laps.

How to Meet a Group

This sort of a situation, I believe, we can call a problem involving a pressure group. When this matter of meeting problems occurs on the school board level, informal procedures need to be replaced by more formal procedures. We would have had a more composed board and a less flustered president if we had anticipated a visitation by such a pressure group. Had we only carefully prepared and written into our minutes a statement of board policy as to how all kinds of requests should be presented to the board, whether the petition is in writing or orally by spokesmen for some self-appointed delegation of citizens. As a humble freshman and layman, I would like to hand this memorandum to any flustered president as a suggestion for accepted procedure in handling pressure groups who may decide to call.

Introduce yourself and the board members to the group and, if the group is small, suggest that their spokesman introduce himself and the group to the board. If the group is large, it may have a duly designated spokesman and a committee. Ask that the committee be introduced. Then Mr. president, address the group in friendly fashion but with neighborly dignity. Talk to them somewhat along this line:

A Basic Policy

This school board and your group should have a common interest in the educational program of this community. The board can provide an educational program only within the resources the community can afford. The board's decisions are influenced only by its desire to provide a well-balanced program which will bring the best results for the entire community. The board recognizes that in its decisions it cannot always be sure that its judgment is infallible. If there is any question on the part of any individual or group in the community that involves its educational program, the board is as anxious as the questioner that the facts be reviewed, clarified, and restated if necessary. The school board, under the laws, carries full responsibility in all matters relating to the program of public education in the community. Although it invites the fullest co-operation from all groups through suggestion, discussion, and recommendation, it must reserve to itself the right and obligation to make final decisions in all matters affecting the educational program and its administration in the community.

Because of the legal responsibilities involved, the board is required to keep a written record of its proceedings and its actions. Because the meetings of the board and the minutes of its meetings are by law open to the public, the board must be sure that its deliberations and decisions are based on written statements. Because of the legal aspects involved in the board's procedures and because this board wishes to be sure that your problem receives full consideration so that decision will not be made until all the facts have been determined and the best possible solution arrived at, the following procedure has been adopted in situations of this kind:

A committee of three members of the board will meet with a similar committee selected by your group. We can arrange for a mutually satisfactory meeting date before you leave. For this joint meeting the committee of board members will be instructed:

[1]This paper was read before a panel meeting of the Illinois School Boards Association by Mr. Preucil who is a member of the River Forest Board of Education. It is here reprinted with permission from *Illinois School Board Journal* for April, 1946.

First: to determine with your committee the objective to be attained in seeking a solution of the problem.

Second: to record all the facts and evidence your committee has available.

The committee of the board will also be instructed to gather such additional data and hear such additional evidence as it may deem necessary in order to give full and impartial consideration to the problem.

The statement of objective, the facts obtained in the joint meeting and any additional data obtained will all be carefully compiled and presented to a full meeting of the board. At the full meeting of the board the following steps will be followed:

1. The statement of objective and all the facts and evidence compiled by the special committees will be reviewed.
2. The facts will be considered in their relation to each other and in the light of board policy.
3. A possible course of action will be considered as to whether it will accomplish the objective sought and is best for the individual, group, community, or program. The board will endeavor to reach the best solution possible and will announce the reasons for its decision to your committee first, so that it will have an opportunity to check the findings of the board and the reasons for the course of action decided upon.
4. The board will endeavor to follow up its action in order to make sure that the objective is fully realized and the individual, group, community, or program involved is properly adjusted to the situation.

Let us be reminded that what we have been trying to do in this situation is to cool heated tempers and restore a feeling of confidence on the part of the disgruntled group that the board will give their problem prompt, thorough, and fair consideration. It is important that the board restore this group to the status of friendly neighbors.

We should also recognize the fact that this group probably got that way because the board had no public relations program, or the public relations program it did have was not sufficiently effective. A well-balanced continuing public relations program will aid in forestalling many difficult situations and likely save the board some unexpected visits from pressure groups.

In closing, let me remind you that a problem is a situation that calls for a decision as to the action to be taken.

Problems can be between people and people.

Problems can be between people and things.

There are problems in every part of our educational program.

A simple practical formula that will enable us to arrive at better solutions to problems is:

a) Determine your objective — write it down.
Then get all the facts.
b) Weigh the facts and decide on what action should be taken.
c) Take that action.
d) Check the results.

Faculty Meetings During School Hours

Frederick F. Quinlan[1]

The faculty and board of education of the Lake Forest public schools are convinced that the dismissal of children for an afternoon and the consequent release of teachers' time for a well-planned workshop activity are successful means for accomplishing a strong in-service program. Even with the best intentions, meetings held at the close of school are not usually inspiring or provocative of further study and work, and although we have heard of successful in-service programs flourishing on Saturday mornings or during the evening, our experience, unfortunately, does not include this phenomenon.

When our board of education approved the superintendent's recommendation that children be dismissed at the close of the morning session, several important psychological results followed. In the first place, the faculty was assured that the board of education believed that its teachers were capable of arranging and carrying out a successful workshop program. The very act of approval indicated confidence in the ability and sincerity of the teaching staff. Furthermore, such a decision was strong evidence that the board of education recognized the importance of affording teachers the opportunity to understand completely the whole program and to increase their own effectiveness as professional people.

[1]Superintendent of Schools, Lake Forest, Ill.

Topics for Discussion

Although our faculty looked forward to a successful meeting, nevertheless, the need for meticulous planning was recognized. Consequently, a planning committee of three of the teachers arranged the details with care.

Several topics for discussion were submitted by the faculties of the various schools, and of these, three were chosen:

1. The relative merit and proper time allotment of the components in the curriculum
2. An evaluation of our in-service training program
3. An effective guidance program in the elementary school

The next step was to choose three chairmen who would lead the discussion. We did not ask building principals or anyone in a supervisory position; the aim was to tap the practical knowledge that the intelligent, experienced classroom teacher possesses. That this device was justified was clearly demonstrated by three well-planned, even scholarly, expositions of the topics, and a ready participation in the discussion by the whole faculty.

Arranging the Meetings

Another aspect of a successful afternoon needs to be stressed. The arrangement and timing of the meetings should be dramatically sound, and should be planned with the care that a playwright uses, who attempts to hold the interest of an audience during an evening production. We began with (1) a meeting from 12:15 until 1:15, which was devoted to a presentation of problems to be discussed later. At this meeting, the three chairmen gave their talks and one of the building principals presided. Group discussions were necessarily very limited. (2) From 1:30 to 2:30, a lunch was served. During the lunch, no formal business was transacted, although the superintendent outlined the procedures which were being followed during the afternoon, and welcomed members of the board of education who were in attendance. (3) Following the lunch, the faculty met in three groups for discussion. Members of the board of education went from group to group, often participating. Each group chose a secretary, who presented important details of the discussion at the (4) final meeting of the whole faculty, which began at 3:30 and ended promptly at 4:00.

We were all enthusiastic about this experiment for the following reasons:

1. Definite plans were made and are now being carried out for several workshops, conducted by our own faculty members. Some of the topics studied are the teaching of music in the elementary grades, the transition from manuscript to cursive writing, a new unit on health.
2. A better understanding resulted of the over-all program, and a determination to continually evaluate it and isolate certain problems for organized attack.
3. A noticeable strengthening of morale occurred. The attendance of the board of education contributed to this end. We feel encouraged to believe that teachers, administrators, and members of the board of education are in the way of working together toward the accomplishment of their common goal: the improvement of the school program for the boys and girls of our community.

INDIANAPOLIS GRADUATES TO ENTER COLLEGE

A. J. Kettler

Are high school students more college-minded today than their older brothers and sisters of the class of 1941? An affirmative answer would seem to be indicated from examination of the results of a survey recently completed by H. L. Harshman, assistant superintendent of the Indianapolis public schools, and J. Fred Murphy, director of counseling for both the Indianapolis public schools and the department of public instruction of the state of Indiana.

The study embraces college plans of 1120 (49 per cent) of the 2308 June graduates of the city's seven public high schools. In 1941, the last year that such a survey was conducted locally, only 25 per cent of that year's 3043 graduates planned immediate college entrance.

Purpose of the survey, Mr. Harshman and Mr. Murphy explain, is to provide college registration officials with data as to the number of prospective entrants from Indianapolis high schools. This information, it is pointed out, is exceptionally vital at this time when the influx of returning veterans to institutions of higher learning has resulted in some instances of overcrowding. Also

reported are instances of some colleges rejecting applications from nonveterans due to limited housing and classroom facilities.

Of 1120 prospective June graduates, 916 have or will apply for entrance to 27 different institutions within the state of Indiana while the others hope to attend schools in 27 other states. Illinois and Ohio colleges appear to be preferred by students in this latter group, 37 registrations planned or listed for each of those two states.

Not without some significance is the breakdown showing 14 major study fields or professional areas selected by the prospective college entrants. While engineering, business administration, and teaching seem most popular, all of the professions are represented to a more or less degree. If figures of the Indianapolis survey could be considered representative of planning by high school seniors generally, relief from threatened teacher shortages may be in sight, for one of twenty Indianapolis seniors has elected pedagogy.

A table showing the choice of professions named by Indianapolis boys and girls planning to enter college in September follows:

Subject	*Boys*	*Girls*	*Total*
Accounting	22	9	31
Architecture	20	5	25
Business adm.	50	78	128
Chemistry	31	17	48
Engineering	145	3	148
Journalism	14	44	58
Library science	1	7	8
Ministry	5	5	10
Nursing	—	55	55
Pharmacy	16	1	17
Predental	10	—	10
Prelaw	30	6	36
Premedics	57	15	72
Teaching	35	88	123
Miscellaneous*	98	287	355

*Includes liberal arts, and special selections such as music, fine arts, design, veterinary medicine, mortuary science, and other subjects in special schools.

ESTABLISH IMPROVED GUIDANCE WORK

In furtherance of the program of guidance long in effect in Perrysburg, Ohio, public schools, a director of guidance has been appointed to lead the program. With the return of men on leave in the service one man has been released for full time to serve in this capacity.

For many years formal work has been done in guidance at the 7, 8, 9, and 12 grade levels. Appointment of the new director will provide for the institution of a complete program from kindergarten through the entire school system.

The duties of the new director will include those of visiting teacher, attendance supervisor, psychologist, testing specialist, and counselor. A considerable portion of his time will also be spent in dealing with slow learners, which activity is partially subsidized by state funds. His duties will extend to other neighboring districts who send many high school pupils to the Perrysburg district on a tuition basis. This will provide an opportunity to bring the outlying districts into a more intimate association with the district receiving their high school pupils.

Another large purpose in the establishment of this position is the hope that it will provide an additional avenue through which the home and the school may be brought closer together by means of a mutual understanding of purposes and a common use of proper and sufficient means to attain those purposes. To that end the director is being expected to work as much with and in the homes as with the pupils.

The director will be particularly concerned with the problems of the atypical, the speech defective, the crippled, the chronically ill, and the delinquent as well as any handicapped by other causes. In order to serve these people best he will foster and maintain an effective relationship with all other agencies which may serve youth in any related capacity. Such agencies will include the Probate Court, the State Bureau of Juvenile Research, health agencies, the local agencies assisting the crippled, those assisting the needy and underprivileged, etc. He will also serve as adviser and co-ordinator in carrying out the provisions of the GI Bill as far as those provisions affect the high school.

Quoting from the annual report of Supt. E. D. Jarvis for 1945 in which the guidance program recommendations were completely outlined is the following description of the desirable characteristics of the director: "He or she should be a master teacher, with special training in psychology, testing, the legal aspects of the attendance laws, in family life and sociology. He has to be a master diplomat, extremely tactful but not spineless, an original thinker, unusually industrious and capable of exercising unusual initiative in the solution of problems, most of which he must formulate for himself as well as being able to solve them. He should be vacuumatic, able to extract information where most other people cannot. He must be kind and sympathetic, but not a driveling sentimentalist, a 'yes person' or just a backslapper. He should have sufficient authority to carry out the solutions he determines to be necessary and must be responsible only to the superintendent. We might 'sagely' observe that he ought to be a $5,000 a year man who will serve happily for about half of that."

A Reporter Attends a School Board Meeting

This is the story of a tender young news gatherer who had the temerity to take an interest in a school board meeting. No ax to grind — no questions to ask — no criticisms to make — just a reporter, a voter, and a taxpayer showing an interest in the city machinery.

He was still on the sidewalk when a member of that important body said, "Where you goin'?" He was told where. "Why?" He was told that, too. O.K. so far — he and I are good friends and I would expect him to greet me like that on the church steps.

The reporter moved inside and sat gently on a hard chair near the door. Roll call found all present plus one guest. The problem of buses for rural students was discussed for next year. It was interesting to learn what that service cost and what small profit there is in it for the fellow with the contract.

Then the board president turned to the visitor and said, "Is there anything you would like to say?" "No," he answered, "I'm just a voter and reporter, here to see what goes on at a school board meeting." She replied, "Too bad you didn't pick a meeting with more exciting business to discuss than we have this evening." He said, "I'd rather come to a mine-run meeting."

The president's next remark came as a surprise. "You know you can't print what is discussed here."

He didn't know it — still doesn't.

"You can only print what is recorded in the minutes of the proceedings which you will get from the city clerk," she continued.

Then — "In fact I'm not so sure you can stay here if we don't want you."

The reporter thought back to sixth-grade civics (she was a good teacher) and said he would fall back on his constitutional rights and would be very indignant were that to happen.

The president concluded by saying, "We can always adjourn if you stay." And they could. But the persistent reporter would be right on deck for the next meeting when called.

Well, that was that and the board got busy arranging the faculty and salary schedules for next year.

What the president didn't realize was that the reporter had sense enough to know a public report on salaries would be in poor taste until after the offers had been received by the teachers.

But frankly, folks, that's what was discussed Monday night. We'll even go so far as to say the salary schedule did not go down any.

We would make a suggestion or two, however. If the board ever chooses to bar the public, please remember to make it an executive session. Then, until we can get that rule changed, you may clear the room of all but yourselves.

And one more suggestion: If we were on that board we would welcome the public. You see, you spend a lot of money and you have charge of our most precious possession — children. You are responsible for securing the best teachers we can afford. You are responsible for good administration as well as fair treatment for students and teachers.

You surely ought to welcome public interest in the job to which we elected you. You should want the public to know that personal likes and dislikes do not enter into your management of our public schools.

We'll drop in again — we liked it.

— *Whitewater, Wis., Register.*

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A BREAK IN THE CHICAGO SCHOOL SITUATION

THE turmoil which has existed in the Chicago school situation for several years came to a climax during the month of June. A large fraction of the citizenship was convinced that the Chicago school system was not free from political manipulation. Outstanding educators were free in their criticism of what the superintendent of schools and the board of education did and did not do.

The break came when a committee of Midwest college presidents made a study of the situation and in an illuminating report recommended that the superintendent of schools and the board of education tender their resignation. The result was that Supt. William H. Johnson tendered his resignation. President James B. McCahey of the board of education refused to resign until Mayor Kelly would request him to do so.

The committee pointed out that it had studied the question of an elective or appointive board of education for Chicago. Its conclusion was that the experience of the larger cities did not warrant the adoption of the elective system. It held that the appointive system should be continued, but supported by a nominating committee consisting of fifteen citizens of high character and unquestioned judgment. It dwelt upon the necessity of adherence to the accepted fundamentals in school administration procedure.

Thus, the latest chapter in the Chicago situation implies a new board of education whose members are to be nominated by a citizens' committee and appointed by the mayor. The board's first and most important duty will be the selection of a superintendent of schools who is not only an inspiring educational leader but also one versed in the business of managing a city school system to the end that a high order of educational service be rendered.

RACIAL AMITY AND RELIGIOUS TOLERANCE IN THE SCHOOLS

NO NATION is entirely free from racial and religious prejudice. But no nation is called upon so much as the United States to foster racial amity and religious tolerance. Populated as our country has been since its early settlement by peoples of all origins and beliefs, our mission of good will toward all peoples of whatever minority groups, becomes evident.

The public mind has been awakened to the nation's duty in this direction. National associations have been formed to promote good will at home and abroad and thus to shape policies which should guide our citizens in their relations with themselves and other countries. Effective international agencies like UNESCO are still to be projected.

All of this means that an important duty is imposed upon the schools. The spirit of racial amity and religious tolerance must be inculcated in the youth of the land. The school boards must develop conditions which will make it impossible for school children to harbor hatreds or to create embarrassment because they have given way to group hatreds. These outbreaks cannot and must not be tolerated.

The school has numerous means of teaching tolerance of the best American variety. Respect for racial minorities and for the adherents of various religious faiths can be taught directly in the classroom; it must be a firm part of the attitudes and expressions of every teacher; it must be insisted upon in textbooks and extracurricular activities. And such respect and even good will must be inculcated without also destroying the respect of the members of a minority group, or even of the individual child, for his race, for his religious faith, for his family or for any desirable group to which he may belong. In its search for truth and its insistence upon teaching truth, the school cannot encourage indifference toward convictions or disregard of truth. There is here a real difficulty which must be met.

THE PERMANENT SCHOOL LUNCH PROGRAM

OF ALL the outcomes of the economic depression of the thirties and of the emergencies of the war years, the permanent school lunch program provides the finest contribution to the welfare of children and to the improvement of school conditions. The original school lunch program was chiefly a means of using up agricultural surpluses and helping farm groups and needy children; the program of the war years was directed toward the winning of the war by helping care for the children of warworkers. The new program is planned with the pupils and the schools as the first and real object of the federal beneficence.

BETTER SCHOOL VENTILATION

THE new regulations on heating and ventilation for the New York State schools are designed to eliminate the old requirement of 30 cubic feet of fresh air per minute per pupil and provide a standard of 10 cubic feet of effective ventilation with a design of 15 feet. The State Education Department will consider "a property designed system of ventilation with window supply and gravity exhaust" and will not require a fan system.

In its purpose of adapting ventilating systems to the conditions found in each local school building, in lowering the arbitrary standards of air supply, and in general seeking economy, the New York regulations represent a commendable step forward. It may be questioned whether window air supply can ever be depended upon for uniformly adequate amounts of air especially in situations where classrooms face in two directions and one or another side of a building is always the lee side and without a positive supply of outdoor air. In the vast majority of situations it may be questioned whether a properly designed system of ventilation is possible without a mechanical support, assuring an even flow of air.

DR. WEGLEIN RETIRES

THE retirement of Dr. David E. Weglein from the Baltimore school superintendency deserves notice because of the distinguished service which this exceptional administrator has rendered American education both locally and nationally.

Dr. Weglein's characteristics as a school executive may be briefly summarized in the words: competence, courage, common sense, and endless capacity for hard work. At home he was recognized as a strong leader — who allowed nothing to stand in the way of better educational service to the children, who could carry through in solving difficult administrative problems and keep the respect and cooperation of antagonistic groups, and who grew in the trust and esteem of the school board and of the community through his soundness, originality, and selfless devotion to the school system. Nationally, the superintendents of the country owe him an endless debt for his service as a wise, persistent advocate of educational betterment. Especially the A.A.S.A. has been the recipient of his work as committee member, officer, and willing worker in the ranks.

PROGRESS IN SCHOOL PLANNING

PROGRESS in the planning of school buildings for the postwar period must begin with the better planning of classrooms so that the basic unit, the class, will be enabled to engage efficiently and without conflict in the various types of activities which the newer programs of education and methods of teaching require. In one school system the educational factors have asked that the classroom include a general seating area, a center for group study projects, a demonstration area, and a work or shop space. This classroom would have movable seating, several tables, a workbench, chalk and tack boards, cabinets and bookcases, a tool rack, and arrangements for storing wraps and the teachers' belongings. It would be larger than the conventional classroom and would be so flexible that a wide variety of changes in organization and method would be possible. It is to be feared that this kind of planning is being carried on in only a few communities and that the vast majority of postwar buildings will have the old, conventional classrooms, with straight-line seating and unilateral lighting. This same reactionary type of planning is more than likely to be applied to the laboratories and workrooms, and to the larger units for physical education and assembly use.

Flexibility in use is a major problem of school planning, but no amount of arrangements for enlarging a structure and for easy interdepartmental movement of students can overcome a failure to build the greatest adaptability to a variety of uses into the classroom.

For World Peace—A Revolution Needed!

Robert M. Hutchins[1]

The sudden change in the international position of the United States confronts the rising generation of her citizens with problems unknown to their predecessors. This change, added to the dislocations attendant upon the end of a great war, has placed an unprecedented strain on the character and intelligence of our people; and the results so far are not encouraging to those who believe that the prospects of civilization depend on the world leadership of the United States. It sometimes seems as though we had stopped fighting the Germans and the Japanese only to begin fighting one another, and to talk about fighting the Russians.

Many people think, and I am one of them, that we cannot have world peace without world government. But, if world government is to last, it must rest upon a world community. Our agitation for world government unfortunately coincides with the demonstration that we have very little community at home; and our vast military preparations suggest that we place our hope for the future in beating other nations rather than in joining them.

These facts and tendencies reveal once more that civilization is doomed unless the hearts and minds of men can be changed, unless we can bring about a moral, intellectual, and spiritual reformation, so deep and drastic as to be called a revolution, throughout the world. Since I believe that this revolution should be led by educated men and women, and since I am convinced that this is the most important task you have before you, I want to take the last few minutes of your formal education to tell you exactly what the task is.

The American Economic Motto

The moral problem has been dramatized for us in the past few weeks by the response to the demands of John L. Lewis and the Railroad Brotherhoods. The outcry against these demands was absurd; for they were in the standard tradition of American economic life. The motto of American economic life is, "Get all you can." When Mr. Lewis and the Brotherhoods saw a chance to get more, they took it; they would have been un-American if they had not. Criticism of their action came with bad grace from those who by precept and example had taught them the lesson that you should get all you can, that the more power you have the more you will get, and that justice is the interest of the stronger.

We hear that labor will never be satisfied. Why should labor be satisfied, when nobody else ever has been? As Tawney has said, "The naïve complaint that workmen are never satisfied is strictly true. It is true, not only of workmen, but of all classes in a society which conducts its affairs on the principle that wealth, instead of being proportioned to function, belongs to those who can get it. They are never satisfied, nor can they be satisfied. For as long as they make that principle the guide of their individual lives and their social order, nothing short of infinity could bring them satisfaction."

The Moral and Intellectual Failure

Desires for things in the material order can never be satisfied. If there is no standard of economic life except that each man shall desire more than he has thus far obtained, if economic activity is simply organized competition in greed, then there is little hope of community at home, and none of community on a world scale. As Walter Lippmann has put it, "The social problem of the modern world arises not out of the objective difficulty of providing an adequate material existence, but out of men's subjective expectations, which, because they are unlimited and insatiable, cause violence, inequality, hatred, and frustration." Violence, inequality, hatred, and frustration—these are the consequences if our watchword is, "Get all you can."

Our moral disorder has an intellectual foundation. The principle of order is the intellect. If we do not know what is good or what is the right order of goods, the failure is an intellectual failure. If it is to order the parts in relation to one another and to the whole, the intellect must see the whole and the parts in relation to it and to one another. But contemporary education has denied the value of the comprehension of the whole. Instead of combating the doctrine that you should get all you can, it has supported and abetted it by saying, "We will help you in your struggle to get all you can by teaching you some special technique that will give you a definite advantage over your fellow men."

Other civilizations were destroyed by barbarians from without. We breed our own. The new barbarians have, many of them, very sharp wits. They have marvelous technical skill. They may even be very learned in specific disciplines. But they are barbarians because they are uncultivated; they lack culture. Culture is not mere aesthetic ornamentation on the one hand or the grasp of a narrow field of specialization on the other. Culture is the mastery of a system of ideas.

The True Community Basis

As Ortega pointed out, living is simply doing one thing rather than another. Life is a chaos, a jungle. The mind of man revolts against bewilderment and finds ways through the jungle in the form of clear ideas and positive convictions. These become the effective guide of existence. We cannot live on the human level without ideas. Upon them depends what we do. Culture, in the sense of the mastery of a system of ideas, is what saves human life from being mere disaster, what makes it something above meaningless tragedy or inward disgrace. The new barbarians are those who have had no will or no opportunity to develop a system of ideas because they have confined themselves or been confined to small fractions of human interest and experience. They have no conception of the nature of the world or the destiny of man. They are isolated, isolated by their private preoccupations and their limited views. They cannot communicate with others because they have nothing in common with others. They cannot be members of a community.

It seems altogether likely that any true community must have a spiritual basis. Why should we love our neighbors? Why should we regard all men as brothers? The brotherhood of man must rest on the fatherhood of God. If God is denied, or man's spiritual nature is denied, then the basis of community disappears. If men are brutes like any others, then there is no reason why the law of the jungle should not prevail among them; there is no foundation for our talk of the dignity of man or for our notion that one man should not regard another as an instrument to be used or exploited. If a man has the power, why shouldn't he get all he can, even though he gets it at the expense of the weak? Why isn't justice the interest of the stronger?

Helping Human Community Arise

Unless we believe that every man is the child of God, we cannot love our neighbors. Most cats and most dogs are more attractive than most men. Unless we see men as children of God, they appear to us as rivals, or customers, or foreigners, unrelated to us except as means to our ends. Even if all men could in some way come to know what was good and to see the goods in the right order; even if all men had acquired the highest culture, the competition for material goods among them and the intellectual differences between them would still tear them apart. But these struggles and differences can be composed and the human community can arise as men meet in the religious dimension and each man sees each other man as a child of God.

"But," you say, "why do I need to see men this way? I am a humanitarian and a liberal. I will help my fellow men without worrying about whether we have a common Father. I will work for better housing, shorter hours, higher wages, and greater educational opportunity for all mankind. I will oppose discrimination among men on the basis of race, creed, or color. I will moderate my desires, seek to get culture, and practice the social virtues 24 hours a day. What more do you want?"

I will admit that if the whole world practiced Aristotle's *Ethics* the whole world would be much better off than it is today. But I doubt if any single man, to say nothing of the whole world, can practice Aristotle's *Ethics* without the support and inspiration of religious faith. This Aristotle himself seemed to recognize; for the ideal man whom he holds up to our admiration is one who is almost divine. The modern critic is inclined to scoff at the Aristotelian phrase that men are rational animals. It is no longer fashionable to refer to the rationality of man. But Aristotle was saying not merely that men were rational, but also that they were animals. Because men are animals, because the flesh is weak and life is hard, the virtues cannot be consistently practiced without divine aid.

For Enough — and No More!

The humanitarian effort, moreover, is vitiated by the sense of superiority which it implies. It becomes another form of self-seeking and self glorification. If you set out to do other people good, it is difficult to avoid the ultimate conclusion that you can do them good because you are better than they are. To found a durable community we must have a deep sense of our own unimportance and a deep conviction of the importance of others. That sense and that conviction cannot be sustained by any merely mundane considerations. They require us to meet our fellow men upon a spiritual plane.

If we want world peace, a world community, and a world state that will last, therefore, we must promote a moral, intellectual, and spiritual revolution throughout the world. Try to get all we can, to breed more barbarians, to regard one another as so many animals, rational or not, will lead us inevitably to the final catastrophe. It is very late; perhaps nothing can save us. But, if we can take for our motto, "Enough — and no more"; if we can gain for ourselves a coherent system of ideas concerning the world and humanity; if we can mean the fatherhood of God when we say the brotherhood of man, then we may have one more chance.

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[1]As chancellor of the University, Dr. Hutchins read the present paper at the annual commencement exercises of the University of Chicago, June 14, 1946.

Peoria Central School Office Survey

The unification of the central office administration of the Peoria, Ill., schools, the discontinuance of the committee plan of conducting board business, and greater co-operation of all elements of the school personnel in the planning of operating improvements are among the important recommendations made by a survey committee headed by Dr. William C. Reavis, of the University of Chicago, as the result of a survey conducted in September and October, 1945.

The survey found that so much fine progress has been made in Peoria in recent years that the use of the recommendations in the report may be considered as a part of a plan of steady evolution. The survey expresses surprise at the improvements made voluntarily by the board in the school-administrative methods since the seven-member organization came into existence in 1939.

A study of the records of the board proceedings kept by the present board supports the criticism that committee meetings are wasteful of the time and energy of the board. It was pointed out that the board could save its members and officers considerable time and could eliminate the criticisms directed against secret sessions by abolishing standing committees and committee meetings.

Again, the practice of discussing in executive sessions or committee meetings and reaching agreement regarding items which are to appear on the agenda of regular meetings is unsatisfactory. The discussion of these items should be carried out in public, said the surveyors, so that citizens may judge the character of the deliberations of the board. The public, they said, has a right to see its representatives on the board in action as they transact the business of the public.

In the judgment of the surveyors, a forward step was taken by the board in adopting the unit type of organization. While much improvement remains to be made, the present stage of development is superior to anything previously achieved under the multiple organization.

New Code of Rules a Need

According to the surveyors, the present code of operating rules and regulations under which the schools are administered is outmoded and unwieldy because it has grown by the process of accretion. The board should, according to the surveyors, make a thorough revision of its code of rules and regulations. Some of the misunderstandings between the board and the citizens concerning its methods of transacting business may be explained by the absence of definite policies clearly defined in the official rules and regulations.

The minutes of department or committee meetings are kept and duplicated for submission to the board at ensuing regular board meetings. Considerable duplication in clerical labor is involved in the preparation of board proceedings for public record. By abolishing committee meetings duplication of committee records would be eliminated. The minutes could then be prepared from the stenographic report of the discussions, and actions on the agenda could be prepared by the superintendent. Copies of minutes of each board meeting would be mailed to the members before the ensuing board meeting and action would be taken on the minutes as set forth in the mimeographed form.

The surveyors found that the board members and the superintendent are keenly conscious of the need for a sound policy with respect to public relations. The lack of such a policy is the greatest single need of the present administration. Because of this lack, both employees and the public are poorly informed on school policies in general which results in many errors in interpretation.

Budget Preparation

The board lacks an effective organization in the central office for budget construction, administration, and interpretation. It was recommended that the superintendent delegate some of the responsibilities he carries to assistants and assume the primary responsibility for the direction of the preparation of the budget and its interpretation. An additional assistant to aid in fact finding and interpreting the schools to the community is also needed.

The selection of an architectural firm to prepare a long-term program for the development of buildings and sites of the district should enable the present and subsequent boards to pursue a continuous program of building and site improvement. This would result in the elimination of present substandard conditions and would secure the provision of plant facilities in line with the needs of the educational program.

It was recommended that the board and superintendent strive to interpret the needs of the schools as pointed out by the State Department of Instruction, and to develop an attitude of co-operation toward the solution of the problem confronting the schools. Every employee should be realistic both with respect to the weaknesses and the strengths of the schools.

The Superintendent's Principal Job

The superintendent of schools, as the chief administrative officer of the board, must provide an instructional program, facilitate its advancement and realization, maintain the educational policies of the state and the local district, supply the board with the means for informing the personnel and the public at large with conditions in the schools, furnish creative leadership to the personnel, and to the board, and act as a professional adviser to the board.

In the development and achievement of these objectives, the superintendent must have the support and assistance of a capable staff of co-workers. To the superintendent, and to him alone, attaches the responsibility for an over-all management and supervision of the schools. Of paramount importance, therefore, is the setting up of an organization for efficient administration. It is recommended that the personnel be selected for three new positions not yet established. The central office must reflect skill in planning, administering, and executing. Functions and responsibilities must be clearly and definitely understood so that the acts of each person may complement and harmonize the entire program.

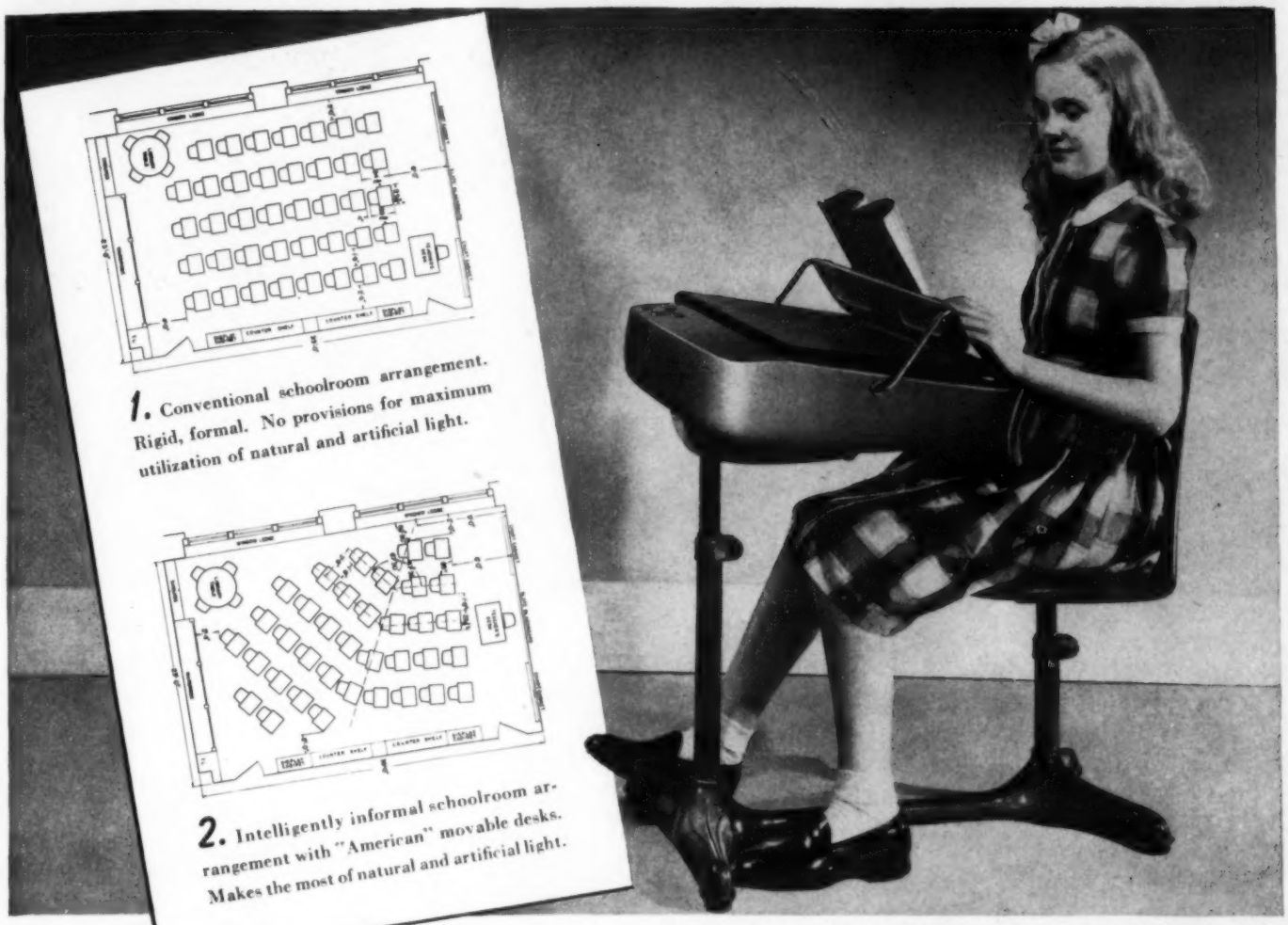
The surveyors found that the incumbent superintendent has labored diligently and painstakingly to effect harmony and unity of purpose among the various forces and groups with whom he works. The committee does not suggest, however, that further improvement is not possible. On the contrary, it believes that much remains to be accomplished and that a program of reorganization is both advisable and necessary, if maximum results are to be attained. Additional services must be provided and these can best be obtained by the refinement of the administrative organization and by added personnel. For example, there is need for new departments of research and public relations, with each director personally responsible to the superintendent. The superintendent should be asked to initiate the organization of a curriculum council to continue to unify and enlarge both present and contemplated curricular activities. Such a council should be composed of representatives of committees to serve all the individual fields and subject areas. The council, meeting regularly once a month, would serve to co-ordinate and give direction to all curriculum activities in the schools.

It was further suggested that the superintendent be authorized to create an educational council, to be composed of representatives of the administrative, supervisory, teaching, and custodial staffs. Selection of the members of the council should reflect the considered judgment of those to be represented and should not be imposed by board or other influences. The council should meet regularly with the superintendent to advise on matters and problems relating to the general welfare of the schools. The purpose of the council should be advisory and not legislative or executive in scope.

Greeley School Board Treasurer Honored for 50 Years Service

Charles N. Jackson, who has served as treasurer of School District Six, Greeley, Colorado for 50 years, was honored with Mrs. Jackson at the third Annual School Board Dinner held at the high school April 10, 1946. Mr. Jackson also has served on the board of trustees of Colorado State College of Education for 12 years and has been active in many civic organizations including the Boy Scouts of America, local council.

Following the dinner Mr. Jackson was presented with a gold fountain pen and pencil set by Senator Walter Bain in recognition of his many years of faithful service.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Beginning at the left, the members of the board are: R. F. Hudson, publisher Montgomery Advertiser (morning paper) and Alabama Journal (afternoon paper); William B. Paterson, owner Rosemont Gardens (florist); James D. Flowers (Ala. National Bank); Dr. Harris P. Dawson, physician (baby specialist); W. T. McKee, assistant superintendent; E. T. Davis (farmer), president; Dr. A. D. Cowles (physician), vice-president; T. L. Bear (Bear Lumber Co.); T. L. Head, assistant superintendent; Robert T. Goodwyn, Jr., board attorney; C. M. Dannelly (Ph.D., Yale), superintendent.

Recent interests of the board include the postwar building program, which has one building at present under construction, namely, an enlargement of the Cloverdale Junior High School; the problem of maintaining effectively trained personnel in the time of manpower shortage; improvement in the salaries paid teachers with a single-salary schedule, based on preparation and experience, adopted for the system as a whole; adoption of report forms and auditing procedures for local school and cafeteria funds, with the bonding of principals as one of the means to apply modern business methods to the handling of such funds; the securing of supplies from the War Assets Corporation; the enlargement of plans for the postwar education of returning veterans, the public schools providing educational opportunities for one fourth of those currently receiving these benefits in the state of Alabama; the improvement of the lunchrooms by the election of a lunchroom director; the improvement of Negro education, including more competent personnel, the extension of school terms to eight and nine months, and the building program, which has resulted in modern school structures throughout the county. The Montgomery schools have pension provisions for retirement of teachers, operate under a teacher tenure law, and in general maintain modern, progressive schools.

Teachers' Salaries

EL SEGUNDO TEACHERS' SALARY SCHEDULE

The board of trustees of the El Segundo Unified School District, El Segundo, Calif., has approved a new single-salary schedule for teachers, based on professional training and experience.

The minimum annual basic salary for a teacher without experience, employed after July 1, 1946, will be $2,250, payable in ten equal installments, at the close of each school month, plus (*a*) $100 to be added for any one of the following: (1) California general secondary credential, (2) a California administration credential, (3) a master's degree, and (4) a bachelor's degree, plus 30 semester hours of graduate work; (*b*) $50 for each year of teaching experience or military service, not to exceed seven years or $350.

All teachers teaching three fourths of the total days of the first semester of a school year will receive annual increments of $100, and those teaching three fourths of the second semester $50. Four semester hours of university or college credit must be earned in summer school once in every three years in order to qualify for the annual increment, beginning with July 1, 1947.

Any teacher who obtains a general secondary or administration credential, who earns a master's degree, or who completes a total of 30 semester hours of graduate work above the master's degree before September 1 of any year will be advanced $100, not to exceed the maximum salary.

Teachers employed subsequent to July 1, 1943, will receive a salary adjustment of $150, in addition to the annual increment of $100; other teachers not less than $200.

Effective July 1, 1946, the maximum annual salary will be $3,300 for teachers with the bachelor's degree; $3,400 for the general secondary or administration credential and 30 semester hours of graduate work above the bachelor's degree; and $3,500 for the master's degree.

Teachers who desire to qualify for the supermaximum salary after September 1, 1947, must present written evidence of having met the provisions of summer school attendance. Teachers who received the maximum of $3,500 during the preceding year will be raised to the supermaximum of $3,600.

WAUKEGAN SALARY SCHEDULE

The board of education of Waukegan, Ill., has allocated $370,000 to teachers' salaries for the next school year. Each teacher in the school system will receive an annual increase of $100 for the next year, with an additional salary boost of $100 for those who have not yet attained the maximum, and a third $100 increase for teachers with master's degrees.

Under the schedule, the minimum pay is $1,700, with the maximum pay for teachers with bachelor's degrees set at $2,400, and those with a master's degree at $2,500. The maximum salary for teachers with less than three years' training will be $2,200, and $2,250 for those without degrees but having three years or more training.

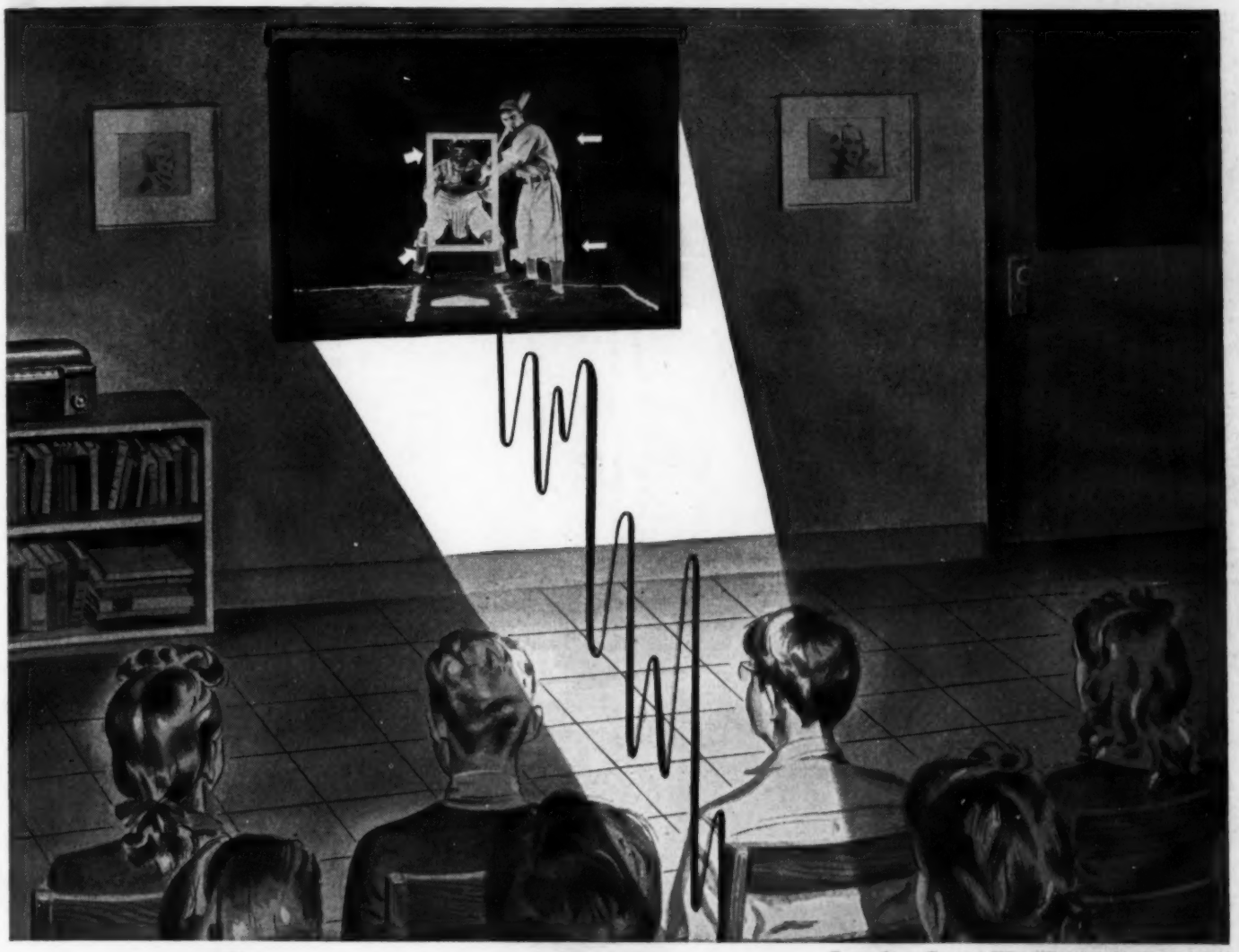
Increments of $85 per year will be given each semester hour of graduate work to both teachers and principals. Teachers will be given an opportunity, beginning with September, of choosing to spend two weeks prior to the opening of school in an in-service training program, for which they will receive an additional two weeks' pay.

FORT SMITH SALARY SCHEDULE

The board of education of Fort Smith, Ark., has adopted a new salary plan for teachers, based on experience and professional training. The schedule applicable to both white and Negro teachers, is for a nine months' term, and divides all teachers into five classifications. Class A teachers with an M.A. degree or five college years of training will receive a minimum salary of $1,500, with annual increases of $50, up to a maximum of $2,100; teachers with a B.A. degree or four college years will receive $1,400, with annual increases of $50, up to a maximum of $1,800; teachers with 90 hours or three college years will receive $1,300, with annual increases of $50, up to a maximum of $1,500; teachers with 60 hours or two college years will receive $1,200, with annual increases of $50, up to a maximum of $1,350; those with less than 60 college hours of training will receive $1,200, with no increases, and a maximum of $1,200.

The board has also adopted a sick-leave plan. Teachers with two years' service will be allowed 5 days' paid leave; those with 3 to 6 years' service, 10 days; those with 7 to 11 years, 15 days; those with 12 to 16, 20 days; and those with 17 or more, 25 days.

► Medford, Mass. The school board has equalized the salaries of men and women teachers by giving the latter a $500 increase. Payment of the increase is divided as follows: one half, or $250 beginning January 1, 1947; and the balance, $250, starting January 1, 1948.



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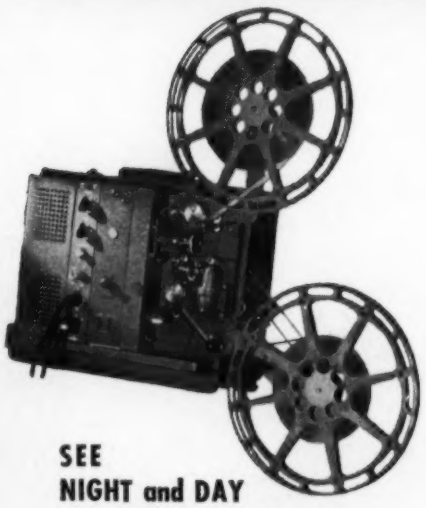

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School Administration News

WHY DO PUPILS LEAVE SCHOOL?

More school systems may follow the lead of Newark, N. J., to find out why pupils leave school, as a basis for developing positive programs which will interest them in remaining in school.

The Newark study of dropouts, which is now being conducted under the leadership of the director of guidance in the secondary schools, includes all the young people who entered high school in September, 1942, and who left without being graduated. The facts which are being tabulated for each pupil include data from his school record card, his choice of a course and his progress while in school, his reason for leaving and what he did after leaving.

Superintendent of Schools Herron, in commenting on the value the findings should have for the schools, said:

"The present study is something more than one step in integrating our school program of guidance. We not only are interested in the students during the years we have them, but we are particularly concerned as to why their interest should lag and why they should drop out and leave school. It is our aim and hope to have all high school students who have the mentality to stay until they are graduated. In this way we shall have a more intelligent citizenry. . . .

"One of the most valuable outcomes of this study will be that we shall be able to bring into every high school situation, for the benefit of principals and teachers, dependable data which will reveal ways in which the individual schools may be stimulated to study the background of their students. The data also will disclose school conditions which make school unattractive. . . ."

One possible outcome of the study, mentioned by Dr. Herron, is a co-ordinated program between school and business so that a larger number of high school students may attend school and work at the same time. — *The American Child.*

NEW EMPHASIS ON GUIDANCE PROGRAM

Increased emphasis on the guidance program at Mansfield, Ohio, has been placed for the school year 1946–47, with the appointment of the following personnel: Dr. Edwin A. Fensch, director of research, who makes psychological examinations and diagnoses; Jesse Beer, director of guidance; John H. Eisaman, attendance officer; and two visiting teachers. The program is headed by a guidance committee, consisting of the above personnel and one representative from each school. The committee meets regularly and discusses immediate problems, follows the program designed for the year, and promotes a public relations program through the local newspaper and radio which keeps the public informed about the schools. During the past year, the newspaper devoted a page to these activities in a Sunday edition, and specialists have been called to explain the program at dinner club meetings, parent-teacher associations, and the like. This program was considered the outstanding achievement of the past year.

NEW SUMMER SCHOOL COURSES

The Parma public schools, Cleveland, Ohio, are conducting summer art and music programs for students this summer. The courses which cover five weeks, will run from June 17 to July 20, and will be conducted in the Parma high school. Classes are held both morning and afternoon so that students may enroll at any time. For the art class, the charge is $10 for five weeks' instruction, and for the music class $5 for each session.

The school board is sponsoring three recreation centers, to be conducted from June 10 to August 2. At the center, all kinds of games and handcraft activities will be offered.

INSTALL FM RADIO STATION IN NEWARK

The board of education of Newark, N. J., has obtained a permit for the construction of an FM radio broadcasting station. Work on the station has already begun and it is planned to have it in operation in the early fall.

PUBLIC RELATIONS BULLETINS ISSUED

The city schools of Corona, Calif., under the direction of J. Henrich Hull, director of public relations, has issued a number of public relations bulletins or house organs, to inform the parents and patrons of the schools on the needs and problems of the city schools. The bulletins are headed with the significant title, "Looking Forward With Our Public Schools," and discuss not only present conditions, policies, and achievements of the several school services but also suggest improvements which the administration considers vital for the further improvement of education in Corona.

School Law

School Lands and Funds

The segregation of public grade school children of Mexican or Latin descent is contrary to the general requirements of the school laws of California. Education code of Calif., §§ 16001, *et seq.*, 16004, 16005, 8002–8004, 8501; Calif. constitution, art. 9, § 1. — *Mendez* v. *Westminter School Dist. of Orange County,* 64 F. Supp. 544, Calif.

School District Property

Gymnasiums are a part of permissible school structures and where a board of education, in the exercise of its discretion, determined to dismantle a gymnasium with the intention of erecting a more modern and better equipped gymnasium, it was acting within its discretion and would not be liab'e for injuries sustained by a workman when a scaffold used in dismantling the gymnasium collapsed. — *Thacker* v. *Pike County Bd. of Ed.,* 193 Southwestern reporter 2d 409, Ky.

School District Taxation

Money received by Onondaga county school districts through annual appropriations of the legislature under the New York Education Law can only be used for the payment of teachers' salaries and the cost of school maintenance, but corporate franchise tax revenues allocated to such districts by the Tax Law can be used for the construction of school buildings or the general expenses of an educational program. N. Y. Education Law, §§ 490, 491; Tax Law, § 219-h. — *Buchanan* v. *Town of Salina,* 60 N. Y. S. 2d 527, N. Y. Sup.

Teachers

A Minnesota school board has the power to discharge a nontenure teacher for cause. Minn. statutes of 1941, 125.06, subd. 10. — *Kuehn* v. *School Dist. No. 70,* Goodhue County, 22 Northwestern reporter 2d 220, Minn.

Although no procedure is provided for the guidance of a school board in discharging a nontenure teacher for cause, a teacher is entitled to a notice of charges made against him and a fair hearing before an impartial board. Minn. statutes of 1941, § 125.06, subd. 10. — *Kuehn* v. *School Dist. No. 70,* Goodhue County, 22 Northwestern reporter 2d 220, Minn.

Where a school board discharged a nontenure teacher for cause, without according the teacher a notice and an opportunity to be heard, the teacher was entitled to recover the balance due on her contract. Minn. statutes of 1941, § 125.06, subd. 10. — *Kuehn* v. *School Dist. No. 70,* Goodhue County, 22 Northwestern reporter 2d 220, Minn.

Teachers and Administration

TEACHER SHORTAGE WORSE

The teacher shortage in Pennsylvania, instead of easing during the first postwar school term just ended, has become more pronounced than ever, according to the State Department of Public Instruction. Of 4000 teachers who entered the armed forces, fewer than 300 thus far have returned to their positions. The comparatively low salary scales are chiefly responsible for the heightening exodus from the profession, according to Dr. Henry Klonower, director of teacher education.

It is expected that the acute shortage of teachers will be as serious in September as it has been during any period of the war.

TUCSON SALARY SCHEDULE

The new salary schedule, recently approved by the board of education of Tucson, Ariz., provides a cost-of-living bonus of $480 in addition to the schedule. Elementary teachers with a B.A. degree but no experience will receive a starting salary of $1,920 and a maximum of $3,456. Teachers with an M.A. degree will be paid a minimum of $2,016 and a maximum of $3,552. The additional $96 for junior and senior high school teachers (extra time) will provide a minimum of $2,112 and a maximum of $3,648.

EXETER SALARY SCHEDULE

The board of education of Exeter, N. H., has adopted a new salary schedule, based on educational qualifications, which will become effective in September.

Under the plan, each teacher is classified in one of three groups: (1) teachers with a master's degree, (2) those with a bachelor's degree, and (3) those with no degree. Teachers with a master's degree will be given a starting salary of $1,500, and annual increments of $100 up to a maximum of $2,300; those with a bachelor's degree will be given a minimum of $1,400, and annual increments of $100 up to $2,000; those with no degree will begin at $1,200, and will be given annual increments of $75 up to a maximum of $1,750.

Any male teacher, living with his wife who is not gainfully employed, is allowed a sum of $400 for the wife. Any female teacher, solely responsible for the support of a husband, mentally or physically incapable of self-support, is allowed the sum of $400 for his support.

Any such male or female teacher, or any widowed teacher will be allowed the sum of $200 for each child of his own living at home, who is not gainfully employed, and who is under 18 years of age. If the child attends school, the $200 allowance will be continued while he is in school but not beyond the age of 21. The allowance for children is limited to two, making a total allowance of not to exceed $400 in any one year.

Any teacher in the system on June 1, 1946, will be allowed a sum not to exceed $100 annually for approved educational work in the summer. This sum will be paid upon the satisfactory completion of the summer's work, upon the recommendation of the superintendent.

The sum of $50 will be paid annually to each elementary school principal. This does not apply to secondary principals.

A ten days' sick leave is allowed each teacher annually. The sick leave is not accumulative. After the expiration of the sick leave, the substitute will receive $6 per day, to be deducted from the salary of the regular teacher.

No member of the teaching staff will be permitted to accept outside employment, except as ordered by the superintendent, from September 1 through June 15. Work during the summer vacation is permissible, but it is expected that teachers will use the summer for rest and further education. The board and the superintendent believe that teaching is a full-time work and that all efforts of the teacher should be along educational lines.

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School Building News

NEW YORK SCHOOL BUILDING PLANS CUT

The New York City board of education's program for the construction of new school buildings and the acquisition of sites, which was sharply reduced several months ago, has been further reduced by the City Planning Commission.

Park Commissioner Robert Moses had proposed to give the board $27,660,000 for construction and sites in 1946. The City Planning Commission has now reduced this to $23,494,603, a cut of $4,164,397. The chief cut is in the allowance for sites, which has been cut from $4,435,000 to $1,000,000. The Commission has allowed only $287,000 for an addition to P.S. 35, Brooklyn, whereas the board had proposed to spend $1,300,000 for this building.

PROPOSE SCHOOL FOR CUSTODIANS

The New York City Bureau of Plant Operation and Maintenance, in a report by Supt. Harold D. Hynds, has presented a proposal that the board of education establish a full-time school for the in-service training of 4000 custodians and custodial workers. The report suggests that greater efficiency will result from upgrading the staff and setting up uniform standards.

"A trained custodial personnel is just as important to the educational system as trained teachers," the report declares. "While common techniques in operation and maintenance apply to all buildings, custodial service as applied to school buildings is distinctly different. A child cannot profit from the best of instruction if his health is impaired by faulty ventilation, inadequate heat, or improper sanitation. School child welfare and school building care are inseparable."

Under the plan, employees of the Bureau would be excused from their duties to attend school two hours a week for forty weeks a year. The course would cover two or three years. Employees would be awarded "certificates" upon completion of the course.

The director of the school would be paid a starting salary of $5,000, rising by three annual increments to $6,500. The two instructors would start at $4,000, and would go to $5,000 by three annual increments. Additional instructors would be added as needed.

LA MESA BUILDING SURVEY

The board of trustees of the La Mesa-Spring Valley School District, La Mesa, Calif., has undertaken an extensive study of the school-plant needs of the district. The survey which included estimates for land and right of way, construction, equipment, plan preparation, supervision of construction, architect's fees, and architectural inspection, revealed that the cost of one building would be staggering. The voters had previously approved a bond issue of $380,000 for a new Rolando School.

The board of trustees, in a statement to the voters, pointed out that the buildings are needed but they hesitate to begin building because of the increased building costs. They have called for an election to get the voters' decision as to whether to build now, or to wait until costs go down. The results of this latest vote by the citizens will be announced by the board.

SCHOOL BUILDING NEWS

► Austin, Minn. A school-bond issue of $989,000, approved by the voters on May 21, will provide money to build additions to existing elementary schools, a new elementary school, and a vocational building. Construction work will be started as soon as materials and labor are available. A previous building program, begun in 1936, was completed in 1940 at a cost of $1,500,000.

► Public-address systems of standard type are to become standard equipment in all Milwaukee high school buildings under an order of the board of school directors. Existing buildings will be supplied whenever major repairs are undertaken and funds are available; plans for new buildings will automatically include provisions for a system.

► Tucson, Ariz. The voters have recently approved a school-bond issue of $2,100,000, which will be paid off in eight to ten years. This is only a beginning, since a state law prevents the board from asking for the full amount needed.

► Mansfield, Ohio. Last fall, the voters approved a school-bond issue, calling for the construction of six elementary school buildings and the remodeling of existing structures. More than 500 citizens aided in advertising and promoting this bond issue.

As an aid to the architects who will design the new buildings, all elementary teachers and principals presented suggestions, along with those of the janitors and maintenance men. The suggestions were tabulated and arranged in the order of frequency and rewritten in a complete report, which was given to the architects as a guide in designing the buildings. The survey contained many fine suggestions from the teachers, which resulted from their experience in teaching in the city schools.

► East Liverpool, Ohio. The board of education has begun a building survey of the school plant for the purpose of ascertaining the community needs, particularly in the elementary schools.

► A five-year plan for modernizing the public school plant of St. Louis has been adopted by the board of education. The plan which calls for the construction of 29 elementary schools, a technical high school, two high schools, two field houses, eight portables, an administration building, and two stadiums, will cost approximately $65,264,917.

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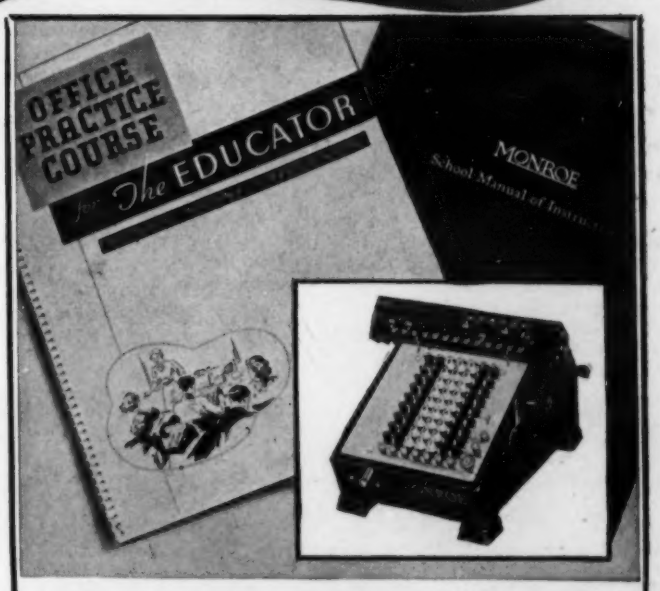

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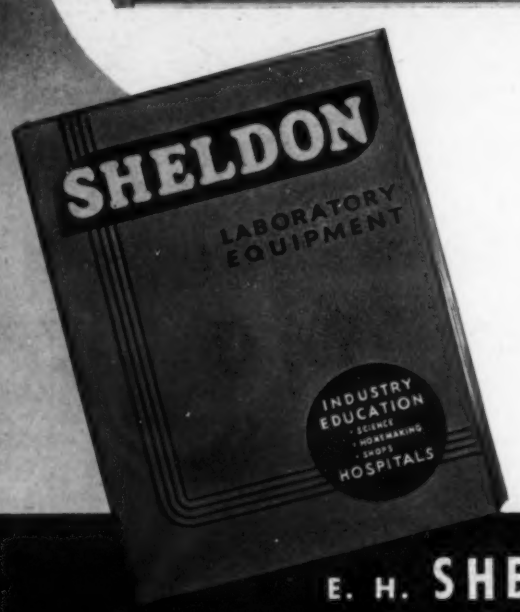

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Personal News

NEWLY ELECTED SCHOOL OFFICIALS OF NEW YORK CITY

Seven newly elected school officials of New York City, along with another restored to his former position, have taken up their duties, making the largest group of appointments to top-flight school posts at any single time in recent years.

The officials include ASSOCIATE SUPT. ELIAS LIEBERMAN, named for a second six-year term as a member of the board of superintendents; NATHANIEL KAPLAN, a lawyer; AUSTIN J. COLLINS appointed assistant secretary; and THEODORE FRED KUPER, restored to his former position as law secretary; MORRIS WARSCHAUER, acting secretary, was given a pay raise. The new assistant superintendents are ISAAC BILDERSEE and MARY E. KENNEDY, junior high school principals; DR. CLARE C. BALDWIN, assistant administrative director in the junior high school division; and DR. HARRISON THOMAS, assigned to the high school division.

PERSONAL NEWS OF SUPERINTENDENTS

► SUPT. T. J. JENSEN, of Fond du Lac, Wis., has been elected superintendent at Shorewood, Wis., to succeed Homer S. Hemenway, resigned. Mr. Jensen, who holds degrees from the University of Chicago and Wisconsin, has served as superintendent at Delevan before coming to Fond du Lac in 1940.

► SUPT. S. T. NEVELN, of Austin, Minn., was honored on May 22, at a dinner given jointly by the school board and the Austin Education Association, in celebration of his twenty-fifth anniversary as superintendent. Dean M. Schweickhard, State Commissioner of Education, who gave the principal address, took as his theme, "The Progress of the Austin Schools During the Past Quarter Century." A gift of a matched set of luggage was presented to Mr. Neveln on behalf of the educational group. In response, Mr. Neveln said: "I have no delusions of grandeur about myself, nor about anything that has been said about me here ton'ght. Whatever progress has been made, has been accomplished by all of us working together."

► LEROY NELSON has been elected superintendent of schools at Elk Point, S. Dak., to succeed Jonas Leyman.

► MARTIN SORENSON, of Wakonda, S. Dak., has accepted the superintendency of the Castlewood schools.

► HENRY E. GOODWIN, of Lyman, Neb., has been elected superintendent of schools at Hemingford.

► JOHN W. HAROLD has been elected superintendent of schools at Hartley, Iowa.

► GEORGE H. VANDENEOS, of Erwin, S. Dak., has been elected superintendent of schools at White.

► ELWYN R. DELL has been elected superintendent of schools at Fremont, Mich., to succeed O. A. Kirk.

► HAROLD O. WETHERELL, of Flint, Mich., has accepted the superintendency at Gaylor.

► SUPT. H. C. COLLIER has been re-elected at Covington, Okla.

► HARRY E. LENHOUTS, of Shelby, Neb., has accepted the superintendency at Arnold.

► ROBERT A. CAHILL, of Niobrara, Neb., has accepted the superintendency at Greeley.

► P. T. JOHNSON, of Barneston, Neb., has taken the superintendency at Oakland.

► DALE COONLEY, of Scotia, Neb., has accepted the superintendency at Genoa.

► JACK KNOX ACREE, of Athens, Ga., has been elected superintendent at Manchester.

► JAMES K. NELSON, of Otisville, Mich., has been elected superintendent at Onsted.

► G. C. BRADLEY, of Reading, Mich., has been elected superintendent at Milan.

► DALLAS MYERS has been elected superintendent at Lexington, Ill.

► J. E. WELLS, of Grand Marias, Mich., has been elected superintendent at Columbiaville.

► M. M. BERNARD, of Comanche, Okla., has been re-elected.

► SUPT. V. R. ECHOLS, of Dover, Okla., has been re-elected.

► LOUIS ELLERMEIER, of Shenandoah, Neb., has been elected superintendent at Shubert.

► DR. MARCELLA R. KELLY has been elected assistant superintendent of schools at Holyoke, Mass., at an increase of $600 in salary.

► SUPT. EUGENE SMITH, of Carmen, Okla., has been re-elected for another year.

► H. L. MITCHUSSON has been elected superintendent of schools at Moore, Okla.

► SUPT. CHARLES A. MARRS, of Pawhuska, Okla., has been re-elected for the next year.

► JOHN L. FITZPATRICK has taken up his duties as superintendent of schools at Chicopee, Mass.

► WILMER L. SHULTZ, of Wallingford, Conn., has accepted the superintendency at Plymouth, where he succeeds H. S. Fisher.

► SUPT. LEWIS E. MCGRAW, of Oklahoma C'ty, Okla., has been re-elected for the next year.

► SUPT. NORMAN HANSEN, of Erickson, Neb., has been re-elected for the next school year.

► SUPT. CLOYD ROGERS, of Hunter, Okla., has been re-elected for another year.

► SUPT. GARR BOWMAN, of Greenwood, Ind., has been re-elected for a fourth term.

► GERALD NEFF, formerly superintendent at Cannelton, Ind., has become business manager at Beloit, Wis.

► L. C. CURRY, of Pierce, Ky., was honored with a degree of doctor of law by Georgetown College on June 4. Mr. Curry is superintendent of schools at Bowling Green.

► EARL H. PLACE, St. Johns, Mich., has accepted the superintendency at Reed City.

► BURTON GORMAN has been elected superintendent of schools at Connersville, Ind., to succeed E. C. Dodson.

► L. H. SIEKMANN has been re-elected as superintendent at Valentine, Neb.

► H. K. HANCOCK, of Monroe, Neb., has accepted the superintendency of the Barneston Consolidated School in Gage County.

► C. M. JOHNSON of Port Gibson, Okla., has accepted the superintendency at Weleetka.

► CECIL JOHNSON has been elected superintendent at Belgrade, Neb.

► AL CALVERT has been elected superintendent of schools at Cambridge, Neb.

► L. C. FERGUSON, of Adams, Neb., has been elected superintendent at Stella.

► CLARENCE T. SPEICH has been elected superintendent of schools at Scotia, Neb.

► SUPT. F. O. STILES, of Fair Haven, Vt., has been re-elected for the next year.

► R. L. TAZEWELL has been elected superintendent of schools at Harvard, Ill.

► SUPT. O. W. STEAD, of Carrollton, Ill., has resumed his position after four years in the army service.

► H. E. WARREN, of Papillion, Neb., has been elected superintendent at St. Edwards.

► DELMAR WARDE, of Juniata, Neb., has been elected superintendent at Winside.

School Board News

ISSUE DIRECTORY OF STATE SCHOOL BOARD ASSOCIATIONS

The Colorado Association of School Boards, with headquarters at Boulder, has announced its second annual Directory of Officers of State School Board Associations for 1946. The Directory lists the chief officers of all state associations of school boards and indicates the months when officers are elected. A copy of the directory may be obtained by writing to the secretary, Calvin Grieder, Boulder, Colo.

SCHOOL HEALTH FAULTS CITED

A school health survey of the District of Columbia city schools, made by Dr. C. C. Wilson, of Teachers College, Columbia University, has been completed and the findings indicate (1) that the directors of health and physical education in both the white and Negro schools are assigned too many duties, (2) that health instruction in the elementary grades is unplanned and generally inadequate, (3) that much progress has been made in the development of the school health program, and (4) that nutrition work has been almost negligible.

The survey recommends that the duties and responsibilities of the directors be studied and redefined so that responsibility for the program can be placed in the hands of one individual.

In the chapter dealing with nutrition, the report says there is but one paid nutritionist in the entire metropolitan area. It was pointed out that 60 volunteer workers served in the field during the war. It was held (1) that no nutritionists are employed in the District or in the five near-by counties, (2) that the District Board has no organized nutritional program, and (3) that there is no nutritionist or home economist in any public welfare department or private agency in the entire area.

CELEBRATES NINETIETH ANNIVERSARY

The Punchard High School at Andover, Mass., has just completed its ninetieth year of service to the community and has issued an illustrated souvenir booklet explaining its present activities and services. A historical note makes clear that Punchard High School "has always played an effective part in developing youth for community leadership, and preparing some for higher education. Religion and patriotism have been among the primary objectives of our school; the results of one are found in the high moral tone of our town, the effect of the other is clearly evident in the honor rolls from our national wars."

The main section of the booklet is illustrated with a photographic record of assemblies, special classes in the scholastic department, laboratory and shop activities, health education activities, and music.

The booklet was prepared by Supt. Kenneth L. Sherman and Headmaster Eugene V. Lovely.

ARLINGTON RECREATION CENTER

The Arlington Recreation Center, organized at Arlington, Ohio, in 1928, by a group of public-spirited citizens, has raised money to build a swimming pool and tennis courts, and to provide other recreational facilities for the children and adults of the community. The Recreation Center has provided a summer program which has functioned continuously and efficiently through the years.

The swimming pool, which is a part of the recreation program, is directed by the regular school staff. The recreation program is a continuous, year-round project. It is under the entire direction of the board of education and is an integral part of the community school program. Staff members, who are regular teachers, receive additional salary for work performed during the period from June 15 to August 31. A youth center and an adult recreation program are also maintained.

PEABODY

"Light Weight"

STEEL FRAME SEATING

Most Practical . . . Most Comfortable

No. 203

To the new Peabody Line of movable light weight steel frame seating is added Peabody's No. 203 Steel Frame Chair. It is a sturdy, easy-to-handle chair, styled to match Tablet Arm Chair No. 201 and Movable Chair Desk No. 202. This fine looking chair with its posture-fit, floating back rest and form-fit plywood seat, provides the utmost in comfort.

At right is Peabody Steel Frame Movable Chair Desk No. 201. Its duo-adjustable top provides most comfortable working space for children of different stature. This desk is quickly adjustable and easily fitted to the tall, the short, or the plump child, as well as to the child of normal build.

No. 201

No. 202

At left is Peabody Steel Frame Movable Tablet Arm Chair No. 202. This chair, like No. 201 and 203, comes with posture-fit, floating plywood back rest, form-fit plywood seat, sanitary foot closures and light weight pressed steel frame. Ask your Peabody distributor for complete details, or write direct to us.

THE PEABODY COMPANY

North Manchester, Indiana

BOARDS OF EDUCATION

► Dunn, N. C. An athletics director has been employed for the supervision of a summer program of recreation. The program is being conducted jointly by the town of Dunn and local civics clubs. In another joint enterprise for mutual benefit, the local Tobacco State League, in return for the use of the school ballfield, has equipped the field with night lights, giving the league a field on which to play, and night lights for the high school games.

► Minneapolis, Minn. Supt. W. E. Goslin, in a recent statement, called attention to the urgent need for a wider use of the school facilities after school hours for recreational and adult-education purposes. He reported that the demand for recreational and educational opportunities for youth and adults is increasing and urged that the public schools look forward to the extension of educational and recreational programs for both youth and adults. It was urged that the board approve the establishment and operation of experimental community centers in school buildings during the school year 1946–47, that the board authorize expenditure of funds from the adult education budget, and that these centers be carried on in co-operation with other community agencies.

► Springfield, Mass. The school board has voted to install a system of uniform accounting procedures and to provide regulations to guide the administration of these funds.

► Cambridge, Mass. The school board has approved a plan to survey the city schools. The estimated cost of the survey is $25,000. It will begin next September.

► Macedonia, Iowa. The school board has voted to purchase a home for the school faculty. It is planned to build a new house when materials and labor are available.

► Mechanicsville, Iowa. The school board has purchased a home for the superintendent. The purchase price was $4,250.

. . . 23 years with practically no Radiator Trap repairs

HOTEL BELLERIVE, KANSAS CITY, MO.

In selecting equipment for the Hotel Bellerive in 1922, Architect Preston J. Bradshaw, of St. Louis, sought long life and low maintenance cost. He specified Webster Sylphon Traps for installation on 605 radiators.

For 23 years, heating comfort was unimpaired and this building required only 24 new radiator trap interiors—one per year.

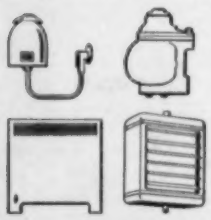
During the 1944-45 heating season a complete check-up and overhaul of all traps was begun by the Hotel Bellerive. Replacement of worn interiors with Webster Sylphon Attachments with new bellows and stainless steel valve piece and insert seat gives the hotel a better trap than the original.

Of course, this service record of Webster Equipment would not have been achieved without conscientious operation of the heating system at proper low pressures and competent supervision by the rental company. Proper selection of heating equipment *and proper use* — these are both essentials of heating economy.

Planning a 194? Hotel Bellerive?

In 1922, the logical choice was a Webster Vacuum System with Webster Traps on radiators and drip points.

Today the choice would be a Webster Moderator System with:



Webster Outdoor Thermostat;

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FINANCE AND TAXATION

► Tulsa, Okla. The voters of School Dist. 22, on May 21, approved the annual ten-mill tax levy for school purposes, by a 19 to 1 majority. The state school law gives a mandatory minimum of five mills on the dollar, assessed valuation of the taxable property of the district, and permits the district to vote an excess levy annually, not to exceed ten mills. State basic aid, which in Tulsa amounts to $200,000 annually, is contingent upon voting the excess levy each year.

The school district includes the city of Tulsa and environs, an area of 154 square miles, with an estimated population of 180,000. It comprises 34 elementary schools and 12 secondary schools; the average membership for the current year is 30,969.

► River Rouge, Mich. The general electors and taxpayers of the school district have approved a 15-mill limit extension and the setting aside of three mills a year as a cumulative building fund. The success of the proposal is attributed to the excellent publicity program conducted by the board and its efforts to define clearly all details of the plan. The board is making plans for a city trade school and it is expected that state or federal funds will be available to aid in the financing of the project.

► Muskogee, Okla. The estimated total budget for white schools in 1946–47 is $542,000. The budget estimate for the past school year was $452,991.

► Beloit, Wis. The school board has approved a budget of $941,688 for the year 1946–47. Of the total amount, the city has been asked to furnish $788,508 from local taxes. The new budget represents an increase of $89,434 over that of last year.

► Middlesboro, Ky. The school board has filed suit against the city in the Bell Circuit Court, in an effort to compel the city to raise the school tax levy from $1.29 to $1.50. The proposed increase would provide the schools with additional money for operation and maintenance.

► Kansas City, Mo. The citizens by a 4 to 1 vote have approved a 3-mill tax levy which will add $1,200,000 to the school district revenues for the next two years. The revenue will make it possible for the school board to operate the schools on a full 40-week term next year to insure increased pay for teachers and to provide for repairs and replacement of the school equipment.

► Milwaukee, Wis. The Shorewood school board has adopted a budget of $608,808 for the school year 1946–47 which will bring school taxes up to $16.16 per thousand assessed valuation. The tax rate for 1945–46 was $14.67.

► The New Jersey Taxpayers' Association has declared that there is grave doubt that the result of public education in the state justify a yearly cost of $125,000,000.

Stating that "there would be no quarrel with the costs if it could be shown that the quality of the product is high," the association said current educational expenditures had increased 170 per cent over 1920. On the other hand, school enrollment has decreased 20 per cent from 1935 to 1944. It was suggested that a committee of laymen survey public education in the state.

► Lakewood, Colo. The voters have approved a $200,000 school-bond issue for school construction purposes. The board is planning the erection of a six-grade elementary school.

► North Kansas City, Mo. The voters of the school district have approved a $400,000 school-bond issue for school construction purposes. The bonds, which will be retired in twenty years through a 2-mill tax levy, will be used to construct two elementary schools and a field house for the high school.

► Sedalia, Mo. The voters of the city have approved an $800,000 school-bond issue. The proceeds of the bonds will be used to construct new school buildings, to fireproof some buildings, and to construct a junior college.

► Houston, Tex. The board of education has set up a budget of $7,500,000 for new school construction. The budget provides $675,000 for new school sites, $3,465,000 for new construction, $675,000 for equipment, and $375,000 for an unallocated cushion.

► Lockland, Ohio. Bonds in the amount of $325,000 have been voted by the citizens for the construction of a school addition. Building restrictions have held up the work but the bonds will be offered for sale in July or August.

► Seattle, Wash. After rejecting three bids as too high for the job, the school board has decided to erect the high school memorial stadium on a cost-plus basis. The project includes an enlargement of the field in the Civic Stadium, the construction of roofed grandstands to replace wooden ones, and the use of two square blocks to accommodate part of the expanded athletic field, ticket booths, and parking area. The architect has been commissioned to make a survey of labor and materials necessary for the job.

► Lenoir, N. C. The citizens have recently approved a school-bond issue of $1,200,000 for new school construction. The school board has a surplus of $225,000, which will be added to this amount, making a total of $1,425,000 for the construction of new school buildings.

► Pasedena, Tex. The school board has begun plans for a $680,000 bond issue to finance the construction of an arts building and a new gymnasium. The board is completing the construction of a high school cafeteria, a music building, and a bus garage, to cost $79,000.

► Fremont, Ohio. The board of education has completed plans for an extensive school-building program. The program calls for extensive additions to two elementary schools, the enlarging and remodeling of the football stadium, and major repairs to the high school and administration buildings. The total estimated cost of the work will be $800,000. A school bond election will be held in the fall, which is expected to provide funds for a new school building. The board has obtained federal grants to aid in the construction work.

ADMINISTRATIVE FUNCTIONS

The administration of any school must be planned on a co-operative basis, co-operative from the board of education, through the superintendent, principal, teacher, pupil, and parent. Educational administration has three basic functions: the philosophical function necessary in the formulation of an educational program, the organizational function, and the managerial function. The principal must formulate a workable plan to expedite these basic functions. These should include:

1. Formulating with his faculty a sound educational philosophy
2. Determining the needs of the community
3. Determining the needs of the school
4. Arranging a program of work to carry out the proposed plan. — *Harold Mennes,* in N.A.S.S.P. Bulletin.

HOLD SCHOOL FOR CUSTODIANS

The Bureau of Research, College of Education, of the Ohio State University, Columbus, conducted a school for custodians on the University Campus from June 11 through June 14. The school was under the direction of Dr. T. C. Holy, director of the Bureau of Research, and was supervised by Dr. E. B. Sessions, a member of the Research Bureau Staff. The school took up problems of heating, care of school grounds, maintenance and repair of buildings, selection and care of janitorial equipment, lighting, custodian's work, and color schemes for school buildings.

CONFERENCE ON EDUCATION FOR PEACE

More than 100 leaders in education and other fields discussed major problems confronting the nation in these critical times at the sixteenth Annual Curriculum Conference at Peabody College on June 25 and 26. The addresses dealt broadly with the theme, Education for Peace, and the speakers included prominent men in the educational field. A program of music and films was presented, as well as an art festival based on the theme of the conference.

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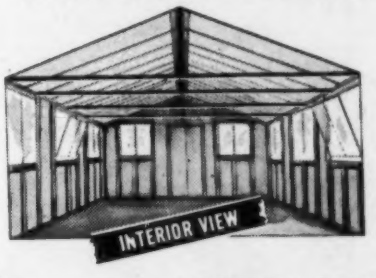

DUE TO GOVERNMENT CONTRACT TERMINATION we are able to offer these building units at a price far below their cost to the Government!

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TERMS ARRANGED IF DESIRED!

EACH UNIT is compactly packaged in 32 crates—Easily stored in a small area if you have not yet property on which to construct it.

HERE'S AN *Easy... Economical* WAY TO LICK CONSTRUCTION PROBLEMS!

With a minimum of expense and labor . . . you can build your new school buildings *now* . . . or expand present ones! With little planning, these functional building units are easily adaptable to school classrooms, shops, dormitories and mess halls!

SPECIFICATIONS:

1. **SIZE: 20 x 48 ft.**
2. **FRAMEWORK: Steel**
3. **SIDES & ROOF: Aluminum**
4. **INTERIOR WALLS & CEILING: ½ in. Insulating Panels**
5. **FLOOR: ½ in. Waterproof Plywood**
6. **16 Windows and Screens**
7. **4 Doors with Ventilating Screens**

TOOLS & DIRECTIONS FOR ERECTION

A complete building manual and all necessary tools furnished with each unit. Anyone who can use a wrench can put these buildings together.

Hurry! Don't Delay

This is government surplus: when these units are gone, no more will be available. Compactly crated,—you can store 3 or 4 units in an ordinary garage.

Write, wire or telephone for further information—or better still, come and see an erected Sample Building.

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2800 THIRD STREET SAN FRANCISCO, 7

Janitors appreciate the convenience of One Single Cleanser for ALL their floors

ONE way to keep your janitor happy is to make his job easier. Give him *one cleanser* for all types of flooring, *eliminate* special cleansers and the time wasted in mixing and preparation, and you'll find him "whistling while he works."

Floor-San gets the cleaning job done *quicker* and *safer*. For you can use Floor-San with perfect safety on rubber tile, asphalt tile, linoleum, terrazzo, wood, or any other flooring.

Floor-San Liquid Scrub Compound is absolutely harmless to any flooring not harmed by water. It has received the approval of the Rubber Flooring Manufacturers Association. It is endorsed by manufacturers of asphalt tile.

Furthermore, Floor-San gives *thorough* cleansing action. Special ingredients *quickly* remove water soluble matter, cut through oils, greases and inert solids and float the dirt to the surface where it is easily washed away.

Begin now to use Floor-San for *all* school floors. Your janitor will appreciate its convenience and you'll get *better* cleaning at *lower* cost.

FLOOR-SAN
LIQUID SCRUB COMPOUND

HUNTINGTON LABORATORIES INC
HUNTINGTON, INDIANA
CHICAGO • CINCINNATI • DALLAS • DETROIT • DENVER • MINNEAPOLIS • NEW ORLEANS • NEW YORK • SEATTLE • SIOUX CITY • TORONTO

Washington News

EDUCATIONAL SURPLUS MATERIALS

Electronics and communication property has been made available for educational institutions. Lists are available from the state educational offices and the U. S. Office of Education, Division of Surplus Property Utilization, Washington, D. C.

WRA SCHOOLS COMPLETE JOB

More than 7000 Japanese Americans have been graduated from the accredited high schools administered by the War Relocation Authority, within ten relocation centers, according to M. M. Tozier, chief of the reports division of the War Relocation Authority.

During the four years that WRA maintained the centers as places of temporary residence for persons of Japanese ancestry evacuated from the West Coast, WRA schools enrolled more than 30,000 elementary and secondary school pupils. Adult classes in English, Americanization, and vocational subjects had a total enrollment of over 20,000.

The War Relocation Agency, which was ordered liquidated on June 30, completed its educational program with the transfer of pupil records to the U. S. Office of Education.

FEDERAL AID BILL APPROVED

The Senate Committee on Education and Labor has approved and recommended for passage the N.E.A. bill for federal aid to equalize educational opportunity in the several states. The grants are to be available at the outset to 33 states and are so planned that an annual outlay of $40 per pupil will be made. The initial appropriation of 150 million dollars for 1946–47 is to be increased to 200 million dollars in the next year, and 250 million dollars thereafter. After the subventions have been made for four years, the states eligible for further aid must pay out for education 2.2 per cent of the total income of their citizens. The bill is directed effectively to prohibit federal control of state and local school systems as well as discrimination against Negroes and other racial groups.

UNIVERSITY TEXTBOOKS

The enormous stock of surplus textbooks used in army service training and Navy V-12 programs are being made available to GI students through the Library of Congress. The surplus books, amounting to 1,500,000 copies, are mostly in the fields of physics, mathematics, and other sciences.

NEW EDUCATION DEPARTMENT

Education will be an important part of a new permanent executive department in the government, according to Washington leaders in the field of education and health. The new department will eventually include all the activities now carried on by the Federal Security Agency, and will include social insurance, health, recreation, education, etc. It is expected that a woman will be appointed secretary of the new Department of Welfare. President Truman will recommend the new department in a message to be presented very shortly to Congress.

U. S. OFFERS FURNITURE FOR EDUCATIONAL INSTITUTIONS

The War Assets Administration has set aside until July 10 all suitable types of surplus furniture and house furnishings which can be used by educational institutions to house student veterans.

It is announced that 16 types of household goods will be sold, at a discount of 40 per cent, to colleges and universities which are converting old homes and gymnasiums for use by veterans. These include such items as beds, blankets, box springs, chairs, chests, mattress pads, mirrors, springs and mattresses, dinette tables, etc.

FAMILIES INCREASE

The Bureau of the Census has recently issued a revised estimate of the number of families in the United States, indicating that a net increase of 1,850,000 families is to be expected between July, 1946, and July, 1948. During the past two years, the increase has been 1,075,000 families, and between 1942 and 1944 the raise was only 650,000. The increase in the number of families has been somewhat hindered by the unusual number of divorces, the trend for which has been upward and will continue to rise to a peak in 1947.

FARM POPULATION DECLINES

An estimate of the Department of Agriculture sets the U. S. farm population at 25,990,000 as of January, 1946, a decline of 14.9 per cent from the census total of April, 1940.

SCHOOL-BOND SALES

During the month of April, 1946, sales of permanent school bonds, amounting to $20,097,000, were reported. Sales in California amounted to $6,208,000; in Ohio, to $3,351,995; in Texas, $3,454,000; in Washington, $2,245,000; in Louisiana, $1,550,000. Refunding bonds for $100,000 were also sold.

During the month of May, sales of school bonds were reported in the amount of $35,237,180, and refunding bonds and short term paper were sold in the amount of $980,000. An average yield of twenty bonds as of June first was 1.36%.

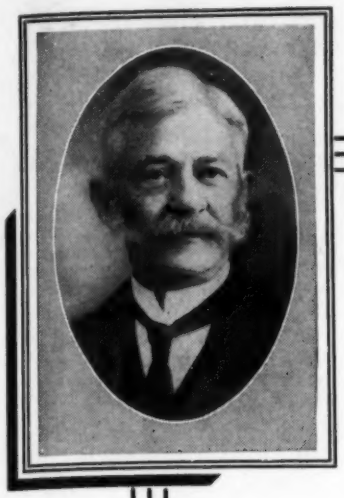
SCHOOL-BUILDING CONSTRUCTION

During the month of March, 1946, Dodge reported contracts let for 157 educational buildings in 37 states east of the Rocky Mountains. The cost was $12,021,000.

COMING CONVENTIONS

August 21–23. Alabama Secondary School Principals' Association, at Montgomery, Ala. W. L. Spencer, secretary, State Department of Education, Montgomery 4, Ala. Headquarters, Huntingdon College, exhibits in charge of Paul Stone, Huntingdon College, Montgomery, Ala.

September 23–25. New York State Council of Superintendents, at Saranac Lake, N. Y. E. L. Ackley, secretary, Johnstown, N. Y. Headquarters, Saranac Inn.



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Publications for School Business Executives

Manual for Architects

Form 22, Paper, 96 pp. The Board of Education, Cincinnati, Ohio.

This manual is the result of several years of work by combined committees of teachers, supervisory and administrative officers, and educational planning experts — all passed upon by the board of education from the standpoint of cost and public practicability — and is in effect a very complete statement of standards of school planning, construction, sanitation, and equipment for the postwar Cincinnati school building program. The manual includes chapters on (1) general procedure to be followed by the architect; (2) the development of the site for building, play, and other necessary uses; (3) the general design and plan of the gross structure; (4) the plan, sizes, and arrangement of general areas, of specific types of rooms common to all buildings, of rooms for elementary schools, and rooms in secondary schools; (5) the electrical, heating, ventilating, plumbing, drainage systems, and other mechanical equipment.

As might be expected, the manual places the instructional purposes of all parts of the building and the elements of safety in the first place; convenience in use and economy are considered of secondary but of continued importance. Definite as the directions are for the architect, there is ample opportunity for originality of design and plan; in fact, the architect is expected to criticize and recommend changes in the application of the standards to his solution of each problem. The manual contains no radical innovations for room plan or equipment, and that is its best feature. It does reflect the best group thinking for the construction of a high standard of school buildings that will be immediately efficient and economical and as fully flexible for future changes as a permanent type of construction can provide.

Financial Problems Arising from Changes in School District Boundaries

By Neil Ford Garvey. Paper, 118 pp., $1.50. University of Illinois Press, Urbana, Ill.

One of the most serious barriers to the consolidation of school districts, particularly in the Middle West where every form of educational inefficiency and waste persists because of the pioneer one-room schools and small district organization, is the problem of allotting the property and the debts of several old districts to the newly created larger districts and of adjusting the tax burdens. In such a series of proceedings some group of taxpayers is inevitably relieved of a burden or loaded with one. Endless and confusing are the local situations, and equally numerous and contradictory are the lawsuits and the findings of the lower courts, all in spite of the clear-cut common-law rule that (*a*) all liabilities remain with the original debtor district or, in case it is extinguished, with its successor district, and (*b*) that property of fixed sites remains in the ownership of the district in which it is subsequently located. It is the inflexibility of the common law that causes much injustice and places overheavy burdens on groups of property owners. This general fault of the common law has led to some legislation which, however, has been quite generally inadequate because it has been based on too narrow a group of principles and too limited experience. The writer of the present study suggests, therefore, that a very flexible formula be developed in the respective states, based on historic and present conditions and implemented in such a manner that the responsible state or county officials can administer it to the greatest satisfaction of the interested parties. Such factors as the relation of assessed to true value of property, the character and extent of liabilities, the trends of population and wealth, and the elusive factor of community temper — all these elements deserve to be considered by the administrative officials.

The present study deserves to be a part of the working library of every county superintendent and of all state departments. The recommendations will help vasty to improve legislation.

Concrete Swimming Pools

Paper, 27 pp. Published by the Portland Cement Association, 33 West Grand Ave., Chicago 10, Ill.

This booklet describes the financing, design, construction, and operation of outdoor swimming pools, both public and private. It discusses particularly such features as site, size, shape, depth, winter protection, lighting, sanitation, dressing room facilities, and wading pools. The last section is devoted to concrete specifications.

A Plan for Tomorrow

A booklet of the Board of Education, Highland Park, Ill.

Some helpful material used in connection with a school reorganization and bond issues looking ahead to a new school and the remodeling of the present buildings. It includes plans for future building needs, provision for new building sites, and plans looking toward the building needs for the next ten years.

How to Control Radiant Heating

Paper, 14 pp. Johnson Service Company, Milwaukee 1, Wis.

The pamphlet contains a description and illustrations of typical Johnson automatic temperature control systems for radiant heating. The troublesome problem of lag, due to the slow heating of large floor slabs or ceiling units, and the equally slow cooling of these areas, has been cleverly overcome by new engineering methods in which Johnson controllers are utilized in new ways.

Red Hook-Gowanus

Prepared by M. C. Cassileth. Paper, 48 pp. Board of Education of New York City, 110 Livingston St., Brooklyn 2, N. Y.

This is the eleventh community study prepared under the direction of Dr. N. L. Engelhardt, and provides the basic social, economic, population, land utilization, and school-building information necessary for a complete reorganization of the school facilities in a peculiarly difficult neighborhood in harbor area of Brooklyn. This district is to be redeveloped with a large, new housing program. It suffers from both housing decay and overcrowding, and the expansion of industrial plants. In the present study suggestions are made for vastly improving the school building plant by remodeling, new additions, and new structures including a junior high school, and by relating the school plant facilities to the recreation and health facilities.

School Bus Standards, 1945

Paper, 54 pp. National Commission on Safety Education, 1201 Sixteenth St. N.W., Washington 6, D. C.

This 1945 revised edition of the school bus standards, prepared by a committee of the National Council of Chief State School Officers, sets up certain minimum uniform standards for safety and economy in school bus construction. The standards, adopted by many states, have resulted in greater safety to pupils and tremendous savings in costs in the procurement of school buses. The booklet offers guiding principles for school bus construction, for large and small vehicles, and provides a proposed list of traffic regulations for use in all the states.

New Supplies and Equipment

Production, Service, and Sales News for School Buyers

AUDITORIUM SEATING

More and more, high schools and colleges are installing modern, fixed seating in their auditoriums. The reasons given are usually the increased comfort which such seating affords and the undisputed attraction a comfortable auditorium holds for every type of school audience. As one observer has stated: "The value of any auditorium is in the attendance it draws, whether returns are in ticket sales or in culture and community spirit; and the auditorium with comfortable seating draws best."

Typical of the fixed seating now being widely installed is the redesigned Bodiform Auditorium Chair as illustrated. The streamlined end standard is particularly interesting. The new design gives modern styling to the well-known Bodiform

New Bodiform Chair.

construction, with arch springs, concealed hinges, and indestructible frame. Seat and back are contoured to the human body. Like previous Bodiform chairs, the new model is made without tacks, or bolts, and with no exposed screws.

American Seating Co., Grand Rapids 2, Mich.
For brief reference use ASBJ—701.

G.E. ISSUES BROCHURES: ON SCHOOLROOM LIGHTING

Two G.E. brochures devoted to lighting of schoolrooms, incorporating creative ideas of leading architects in these fields, have just been released. Printed in full color, these 12-page brochures are the last of a series of twenty devoted to various lighting fields. Brochure Y-551 is entitled "Arches of Light . . . for Modern Schoolrooms." Brochure Y-552 is entitled "Remodeling with Light . . . to Streamline Office Space." The schoolroom booklet features the creative ideas of E. Post Tooker, member of the National Education Council, and writer of many outstanding articles on various phases of school planning. Brief copy and large illustrations are used to portray Mr. Tooker's ideas for modern lighting of the school principal's office, the classroom, the auditorium, and school laboratory.

General Electric Lamp Dept., Nela Park, Cleveland 12, Ohio.
For brief reference use ASBJ—702.

VICTOR "FOLLOW THROUGH" SERVICE

In 16mm. motion picture equipment, "follow-through" service is particularly important. Here is the triple insurance in a Victor: greater availability of service, by factory trained men; faster handling of adjustments or replacements because of Victor simplicity of design; more exclusive Victor features that minimize service needs: Safety Film Trip, 180° Swing-Out Lens Mount, Stationary Sound Drum and Offset Film Loop.

Victor Animatograph Corp., Davenport, Iowa.
For brief reference use ASBJ—703.

DAVID W. RIDGWAY

Lt. Com. David W. Ridgway, recently discharged from the U. S. Naval Reserve, has been appointed administrative assistant to Dr. V. C. Arnspiger, executive vice-president of Encyclopaedia Britannica Films Inc. Mr. Ridgway served in the office of the Chief of the Navy Photographic Service, as assistant head of the training film and motion picture branch of the navy's photographic division.

WAKEFIELD OVER-ALL LIGHTING A NEW CATALOG

Catalog No. 46 presents engineering details of lighting equipment designed for drafting rooms, stores, and schools. Construction details with full dimensional data, light distribution curves, and tables for estimating lighting results, are included in the new 40-page book. An introduction to the catalog explains Wakefield Over-All lighting.

The F. W. Wakefield Brass Co., Vermilion, Ohio.
For brief reference use ASBJ—704.

BRITANNICA NEW FILM TITLES

Six new films on football and basketball have been produced by Encyclopaedia Britannica Films and will be released to schools and colleges this summer. The films, which demonstrate safety and basic methods of playing the two sports, were produced in collaboration with top-ranking athletic experts. Andrew Kerr, football coach of Colgate College, Hamilton, N. Y., and one of the leading gridiron authorities, is collaborator on the three films. Their titles are "Tackling in Football," "Blocking in Football," and "Ball Handling in Football."

The basketball films were produced in collaboration with Wilbur Johns, basketball coach at the University of California at Los Angeles, and developer of leading basketball stars. These three films are on "Defensive Footwork," "Ball Handling," and "Shooting in Basketball." Norman Sper, noted sports writer, whose football predictions are syndicated throughout the United States, supervised the production of both sets of pictures. The films are designed for use in high schools, junior high schools, and colleges.

Encyclopaedia Britannica Films Inc., 20 North Wacker Drive, Chicago 6, Ill.
For brief reference use ASBJ—705.

GERMICIDAL FIXTURES FOR AIR DISINFECTION

An exhaustive treatment of the technique of the selection, installation, and operation of germicidal fixtures for air disinfection, is fully covered by a recent booklet by L. J. Buttolph and it may now be procured. Schools and classrooms receive attention, and much technical data for air disinfection will be found in the illustrated brochure.

General Electric Co., Engineering Div., Nela Park, Cleveland, Ohio.
For brief reference use ASBJ—706.

NEW MAPS AND GLOBES

"Easy to read and worth reading" is the new Catalog No. MG-46-T covering the new lines of W. C. Maps and Globes. New mountings are also described and illustrated. A special index of the "Suggested Minimum Map and Globe Requirements for Elementary and High Schools" will be found most useful. The new Champion Maps are featured in color with full description of the series.

Weber Costello Co., Chicago Heights, Ill.
For brief reference use ASBJ—707.

TRI-LOCK CATALOG BINDERS

A new catalog binder, named the *Tri-Lock*, frees users of loose leaf catalog binders of the necessity of choosing between compression and flat opening. Formerly it was necessary to select a binder which held its pages securely under compression, but provided no flat reference convenience — or a noncompression binder equipped with rings, prongs, or telescopic posts, which provided no security to its contents. The unique construction of the *Tri-Lock* binder has overcome these handicaps to efficient cataloguing. The *Tri-Lock* binder has been designed and engineered to meet many special loose-leaf catalog requirements. Any practical sheet size, capacity, and number of posts are available, all combining the much desired compression and flat opening features.

Remington Rand Inc., Buffalo 5, N. Y.
For brief reference use ASBJ—708.

NEW FINISH FOR SCHOOL COACHES

A lustrous, long lasting finish now being given Superior school coaches presents a new concept in school coach attractiveness. The newly installed spray painting and air conditioned baking and drying system — one of the most elaborate in the industry — guarantees a finish for each Superior school coach comparable to that accorded the finest motorcars.

Safety-minded experts also point to the value of this new attractive finish of Superior school coach in compelling attention to its presence on the highways.

Superior Coach Corp., Lima, Ohio.
For brief reference use ASBJ—709.

BRADLEY ACQUIRES BABB CO.

Milton Bradley Company of Springfield, Mass., has purchased the stock and good will of Edward E. Babb & Co., Inc., of Philadelphia. They will continue the business as a subsidiary under the name of Edward E. Babb Company of Pennsylvania.

ISSUE SECOND EDITION OF "PAINT COLORS"

A new classroom color combination, the sixth in a series designed by school officials has been announced by Harold D. Hynds, of the Bureau of Plant Operation and Maintenance, New York City, in the second edition of the bureau's publication, "Paint Colors."

A new combination calls for a peach wall, with a rose band below the chair rail and over a black baseboard. The ceiling may be either light cream or off-white.

The first edition of the brochure, an attractive loose-leaf publication, was issued in 1944. The second edition is a practical treatise on the theory and use of color, and is intended for the use of principals, teachers, and custodians as a guide in the selection of color schemes and redecoration of buildings. It is fully illustrated with actual samples of colors and is available to school authorities at the cost of production ($1.50).

PROGRESS IN MT. VERNON

The school board of Mt. Vernon, Ohio, is continuing the study of teachers' salaries. Effective Jan. 1, 1946, a new single salary schedule became operative.

Through the efforts of interested board members the outside millage has been increased from 3 to 4 mills. The possibility of requesting an extra mill to further increase salaries of teachers and employees is being studied co-operatively with a committee of teachers and citizens. By co-operative effort instruction costs per pupil in the Mount Vernon schools have been increased from $50 to $80 during the past five years. That results are following is evidenced by the fact that because of larger opportunities in the art area, Mount Vernon pupils have won state and national recognition, by producing the prize winning poster in the Michael J. Dowling Easter Seal Contest, first prize in weaving in the 1945 National Scholastic Contest at the Pittsburgh Art Museum, and first prize in photography in the 1946 contest.

NEW LIGHT ON SCHOOL LIGHTING

(Concluded from page 31)

Artificial Lighting

Having arranged and decorated a room so that it provides a satisfactory visual environment with natural light alone, the artificial lighting is not so serious a problem. It is apparent, of course, that natural light cannot be depended on as the sole source of illumination in a classroom. There are dark days even in Texas, and many classrooms are in use at night.

The artificial lighting system must fulfill the same requirements as the natural lighting system. There should be enough light on the work to provide satisfactory brightness levels, and the brightness ratios in the field of view should be within the same limits. There should be no artificial sources within 50 degrees of the normal line of sight.

These requirements preclude any but the indirect or luminous indirect type incandescent units, and similar well shielded fluorescent units. The standard classroom lighting plans, however, tend to produce excessive brightness near the front of the ceiling. There is also the problem of co-ordination between natural and artificial lighting, where it is necessary for the artificial system to compensate for only a partial deficiency in the natural light.

These and similar problems are under investigation by the author now, and include some rather unorthodox, but promising lighting arrangements. These will be reported as the studies progress.

The major part of the necessary improvements will have been made, however, when the room has been so arranged that the visual environment with natural lighting has been made a beneficial environment. Such improvements will go far toward decreasing the number of visual cripples our present schools are producing.

References

1. "Lighting and Child Development," D. B. Harmon, *Illuminating Engineering*, April, 1945.
2. "Control of Natural Light in Classrooms," R. L. Biesele, Jr., W. E. Folsom, and V. J. Graham, *Illuminating Engineering*, September, 1945.
3. "Specification Points of Brightness," H. L. Logan, *Illuminating Engineering*, September, 1939.
4. "Comfortable Lighting," Ward Harrison and Matthew Luckiesh, *Illuminating Engineering*, December, 1941.
5. "Brightness Engineering," Matthew Luckiesh, *Illuminating Engineering*, February, 1944.
6. "Glare Ratings," Ward Harrison, *Illuminating Engineering*, September, 1945.

NEWS OF SCHOOL OFFICIALS

► Mrs. Edna Galbraith has been re-elected president of the school board at Fairbury, Neb.

► Jess Quinn has been re-elected president of the school board at Gothenburg, Neb.

► C. R. Stasenka has been elected president of the school board at Wilber, Neb.

► K. K. Kull has been elected president of the school board at Burwell, Neb.

► Leonard Furtak has been re-elected president of the school board at Ravenna, Neb.

► H. C. Moranville has been elected president of the school board at Bayard, Neb.

► F. J. Rastede has been re-elected president of the school board at Pierce, Neb.

► W. H. Plourd has been elected president of the school board at Fullerton, Neb. Leonard Knowles was named vice-president.

► Lyndon Garner has been elected president of the school board at Louisiana, Mo.

Advertisers Products and Services

Advertisers in this index are given a code number in addition to the page number on which the advertisement appears. Refer to the advertisement for product or services available. Write direct to advertiser or use the coupon in requesting information from a number of advertisers.

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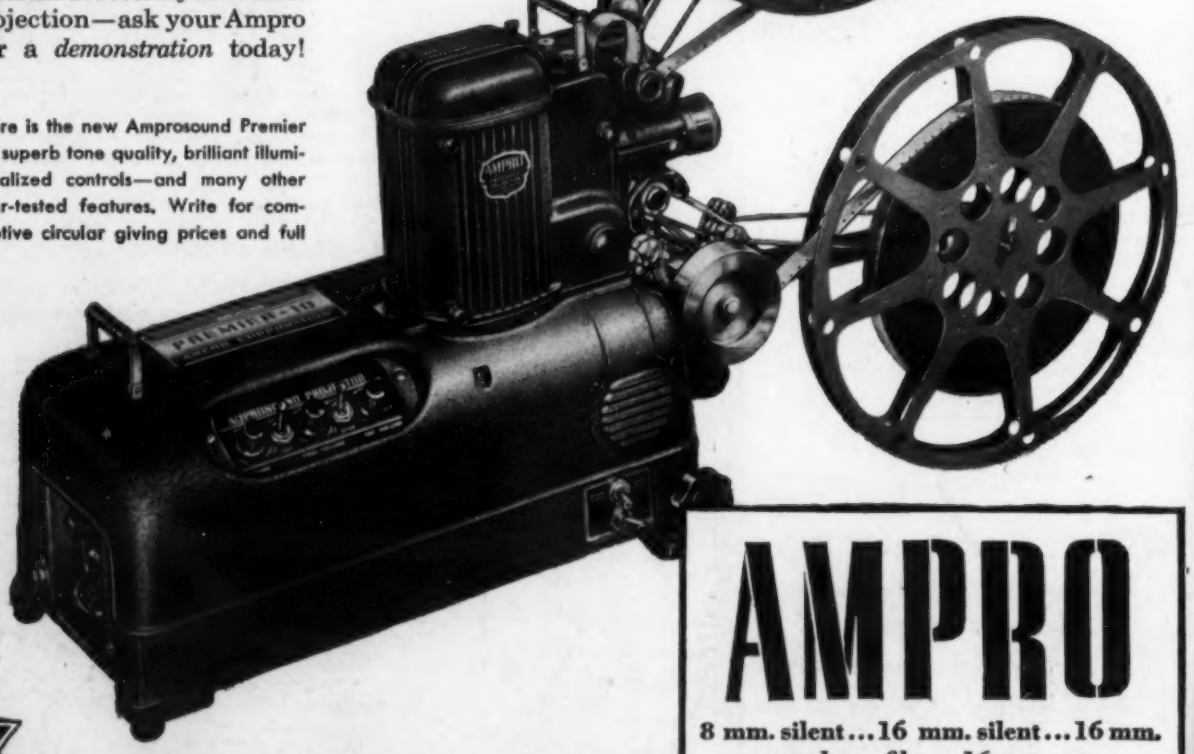
Illustrated here is the new Amprosound Premier 10—offering superb tone quality, brilliant illumination, centralized controls—and many other exclusive war-tested features. Write for complete descriptive circular giving prices and full details.



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